COMMERCE

FEBRUARY, 1949

25 CENTS



hearth steel making at U. S. Steel's Carnegie-Illinois Corporation South Chicago Works

THE ECONOMIC FACTS OF LIFE AND THE STEEL INDUSTRY - See Page 20



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STATISTICS

CHICAGO BUSINESS

	December, 1948	November, 1948	December, 1947
Building permits	339		
Cost	\$10,717,400	\$11,687,400	\$9,652,6
Contracts awarded on building projects,	817	950	7
Cook Co.			
(F. W. Dodge Corp.)			
Real estate transfers	5,105	5,603	
Consideration		\$6,188,515	\$7,557,5
Retailers' Occupation Tax collection, Cook	\$7,947,479	\$8,251,708	\$7,932,9
Department store sales index	384.2	285.0	393
(Federal Reserve Board) (Daily average 1935-39=100)			
Bank clearings	\$3,631,551,201	\$3,220,714,982	\$3,445,539,49
Bank debits to individual accounts:			
7th Federal Reserve District	\$18,242,263,000	\$15,906,532,000	\$17,385,000,00
Chicago only	\$9,639,957,000	\$8,098,951,000	\$9,509,527,00
Chicago Stock Exchange transactions:	783,000	683,000	628,00
Number of shares	\$18,437,683	\$18,973,451	\$17,112,90
Railway express shipments, Chicago area			
Air express shipments, Chicago area	63,286	47,595	73,50
L. C. L. merchandise cars	24,247	27,463	30,12
Originating local telephone messages		173,858,604	190,477,55
Electric power production, kwh.	1,112,757,000	1,029,740,000	1,040,005,00
Revenue passengers carried by Chicago Transit Authority lines:			
Surface DivisionRapid Transit Division		65,739,186	75,161,26
	15,710,585	14,824,674	16,892,59
Postal receipts	\$11,659,719	\$9,469,654	\$10,734,40
Air passengers:			
Arrivals Departures		93,016 96,998	76,80 80,18
Consumers' Price Index (1935-39=100)	175.4	175.9	
Live stock slaughtered under federal			1 1 1 1 1 1
inspection	759,938	708,891	852,82
Families on relief rolls:			
Cook County		19,481	13,12
Other Illinois counties	16,012	14,831	13,23
1-Preliminary figures.	10,012	14,631	

MADOU

	MARUN, 1949, IAA CALEN	IUAK
Date Due	Tax	Returnable to
15	Employers who withheld more than \$100 during previous month pay amount withheld to	
15	File return for Federal Income Tax withheld at source. (Forms 1013 and 1942.) Payment of tax on or before June 15	Collector of Internal Revenue
15	Final 1948 Income Tax Return (individuals) and settlement of 1948 income taxes (Form 1040 or 1040A)	Collector of Internas
15	Federal Income Tax (Calendar year basis). Full payment or payment of first quarterly installment. Corporations, Form 1120; File partnership information returns Form 1065, no payment required. Fiduciaries	Collector of Interna

- Declaration of 1949 estimated tax by individuals and Collector of Internapayment of one-quarter of tax in excess of estimated
- Illinois Retailers' Occupation Tax return and payment Director of Revenue for month of February
- Federal Excise Tax return and payment due for Feb- Collector of Internal 31 ruary, 1949

Revenue

Revenue

COMMERCE

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OL. 46

NO. 1

FEBRUARY, 1949

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In This Issue --

With a million-dollar larger Congressional appropriation than ever before at its disposal, the Justice Department's Antitrust Division is planning a year of extensive litigation against alleged monopolies. Particular attention will be given concerns which the trustbusters believe have employed patent prerogatives to avoid the antitrust laws. Joseph R. Slevin tells of this new drive in an article on page 13.

Static electricity - that mischievous phenomenon that is forever sparking off one's finger - is a perennial foe of industry, causing millions in factory losses, production slowdowns and - all too frequently - loss of life. Today, industry has many new weapons with which to combat the static troublemaker, but not all companies have yet applied the newest and most adequate safeguards. Commerce tells the story of static, its threat to industry, and modern methods of fighting it - page 15.

In the last 12 months COMMERCE has carried several articles delineating official defense planning as it affects industry and commerce. This month another article - by Jack Robins writing from Washington brings the reader up-to-date on developments in this significant and fast-moving field of industry-government cooperation - page 17.

Everyone has heard a great deal about ex-GIs who launched their own business ventures after the war. By now, at least half a million such veterans have tried their hand at the free enterprise system and over half a billion dollars in government loans have been advanced to assist in the starting of these new businesses. A logical question is: How are our vets doing as businessmen? Larston D. Farrar answers that question in a highly informative article beginning on page 21.

This month, an address by Irving S. Olds, board chairman of the United States Steel Corporation, has been selected as "Speech of the Month." Mr. Olds' penetrating observations appear on page 20.

One of a series of advertisements showing the benefits of futures trading on the Chicago Mercantile Exchange.

FARMERS SHARE OF RETAIL DOLLAR*

CHEESE 62% MARKET BASKET .. 53% BUTTER 77% CHICKENS ____ 67%

ORANGES ____41% EGGS ---- 74% VEGETABLES --- 36 FRESH MEAT PRODUCTS __ 73%

*Bureau of Agricultural Economics – U. S. Dept. of Agr.

BUTTER and EGGS

bring farmers largest share of consumer dollar

For years, these efficiently distributed commodities have yielded larger net return to producers than any others, as proved by government figures.

When farmers grow crops, they create new wealth.

For years, the cry has been, "Cut down the costs of distribution. Give farmers more of the wealth they create.

It is with no little pride that we read the government figures showing that butter and eggs move from the farm to users at the lowest distributing cost of any agricultural commodities, and have for many years.

In 1935-39, the same government figures show that farmers got only 40% of the market basket, 53% of meat products, 53% of cheese, 56% of chickens, but received 68% of butter and 77% of egg retail prices.

This remarkable record is due in no small measure to the maintenance of a closely supervised national cash and futures market for butter and eggs by the Chicago Mercantile Exchange since 1919. This market enables many men in the industry to insure themselves against price fluctuations. Their transactions aggregate hundreds of millions of dollars each year.

What does this accomplish?

- It enables banks to finance their operations at lowest interest rates
- .. It enables operators to rely upon small, normal but assured profits from large volume operations.
- It provides a national market place with daily published quotations, leveling out supply and demand from all parts of the country.

 Thus it increases the efficiency of distribution by elim-

inating risks and insuring profits.

Students of agricultural economics agree that futures trading stabilizes prices, and adds importantly to the participation of farmers in the new wealth they create.

Members of this Exchange, with their years of experience in counseling producers, handlers and users of commodities, will be glad to advise on how the facilities of this national market can be helpful to you and your



FREE-Send for our new booklet, "Why We Have Butter, Eggs and Other Commodities When America Needs Them," which explains how the Chicago Mercantile Exchange functions and renders a service to the nation. Check if wanted.

For specific information on trading in com-modities, such as contracts and specifications, please check those you are interested in.

Apples Butter Eggs

CM 2

CHICAGO MERCANTILE EXCHANGE

110 North Franklin Street

Chicago 6, Illinois



EBRUARY, 1949

The Editor's Page

Unexpected Dividend

URING the war it was generally considered that the government's huge investment in building synetic rubber plants would have to be written off as wartime cost of little or no peacetime value. The vestment in increased aluminum-making capacity as regarded in much the same light. Developments nce the war, however, have shown these pessimistic resses to have been wholly unfounded.

The government, which compels the rubber indusy to use a certain tonnage of synthetic rubber in s production found that the industry last year took most twice as much as Congress had decided it would ave to take. Two factors, both of which probably ill continue to expand the use of synthetic, brought his about. One has been the discovery that for many ses synthetic is preferable to natural rubber. cond has been a matter of price. The government as consistently maintained synthetic rubber at 181/2 ents a pound. Natural rubber has ranged to almost 6 cents, a price differential that was not justified for any uses of the product.

How high the price might have gone had our ritish and Dutch suppliers not had to compete with ynthetic is an unanswerable question. It is sufficient say that as a competitive factor, it has been and robably will remain very wholesome to have availble unused capacity for synthetic production.

The situation in aluminum has been somewhat diferent but the results have been even more startling. ue partly to the tremendous expansion in the econmy and partly to the unexpectedly high requirenents for aluminum for military aircraft, the metal is gain in short supply. It has, in fact, been put under llocation.

From their wartime synthetic rubber and aluminum evestments the American people have already received nexpected dividends which promise to be maintained.

Return Squeeze?

MONG the least emphasized aspects of the cold war have been developments in the direct trade etween Russia and the United States. Almost a year go we started to tighten down on the export of ritical items to Russia. The result was a drop in ur shipments of machinery and similar goods of more han 75 per cent last year from the 1947 total. Meanwhile, the Russians, seemingly unaffected by our polcy, continued to ship us two very critical items, mananese and chrome, along, of course, with such nonssentials as furs. Approximately 40 per cent of our netallurgical chrome and 35 per cent of our metalurgical manganese continued to come from Russia.

Soviet representatives have now hinted that it may ot be possible to maintain shipments of these two

vital metals at former levels. Whether this is just an added irritant in the nerve war or is a threat that will be translated into fact remains to be seen. Russia finds dollar exchange just as useful as every other country in the world today, and her manganese and chrome exports to us provide a tidy sum. If she actually does apply the squeeze, however, our policy makers will face the choice between two undesirable courses. They will have to cajole more manganese and chrome from Russia with more exports of American machinery and transportation equipment. Or it will be necessary to invest American dollars and equipment in developing added production of the two ores in other foreign countries since the United States is wholly deficient in both. Whatever the cost either in loss of face or dollars, the American steel industry cannot be permitted to be handicapped by a shortage of either ore.

Prospering By Discrimination

THE C. I. O.-United Auto Workers, which got into cooperative retailing during the General Motors strike two years ago, shed new light on its philosophy and plans at its recent Milwaukee convention. The U. A. W. now sees cooperatives as a means of organizing unionists as consumers as well as workers.

With this objective, the union has launched a vigorous campaign to promote cooperatives among the members of its local unions. Last year, 20 wholesaleretail cooperatives were formed. Two were started in Detroit, with U. A. W. men investing \$185,000, and these two, plus six others in the Michigan auto motive manufacturing district, are now doing business at an annual rate of better than \$7,000,000.

If U. A. W. plans succeed, its development of cooperatives to date is just a minute beginning. The idea is to expand the union's influence in community life. According to Walter P. Reuther, U. A. W. president, the program is aimed at "every community, congressional district and neighborhood." It is noteworthy in this connection that membership in U. A. W.-sired cooperatives is not limited to the union's members but is open to any consumer.

The union can, of course, not be blamed for attempting to extend its influence and services to whatever degree the law allows. The fault in this instance is that by federal law cooperatives are given tax advantages over private business. The astute U. A. W. is simply capitalizing on this discrimination in its new attack on private competitive business and profits. Congress should withdraw preferential treatment from all cooperatives and let free competition decide whether coops or private enterprises are the more efficient.

Man Sturdy





- Graduate I. A. School The nation's first graduate school of industrial administration will be established by the Carnegie Institute of Technology with a grant of approximately \$6,000,000 given by the W. L. and May T. Mellon Foundation. The new school will offer a three-year program, including one year of graduate work leading to a Master of Science degree in industrial administration. Of the \$6,000,-000 grant, at least \$1,000,000 will be used to construct a building on the Carnegie Tech campus and about \$5,000,000 will be used as an endowment for the school. William Larimer Mellon, nephew of the late Andrew W. Mellon, was one of the founders of the Gulf Oil Corporation and its active head for the past 46 years.
- Casualty Insurance Peak An estimated \$3,500,000,000 of casualty insurance was written in the United States last year, a new high and an increase of about 25 per cent over 1947, according to H. G. Kemper, president of Lumbermen's Mutual Casualty Company.
- JATO for DC-4 Braniff International Airways is testing the use of JATO (Jet assisted take-off) on DC-4 airliners to provide an added safety factor at high altitude airports. Tests are being conducted at La Paz, Bolivia, which, at 13,398 feet, is the highest airport in the world. As an auxiliary standby, JATO gives a DC-4 an available thrust equal to 1200 horsepower, or a fifth engine, for emergency use in the rarefied atmosphere of high altitude airports.
- Power Show The ninth Midwest Engineering and Power Exposition will be held from November 11 to 16, inclusive, at Chicago's Navy Pier. It will feature equipment for power generation, distribution and use and is the first

major power engineering exposition to be held in the central west single 1937.

- Gas Tax Inflation Attempts increase gasoline taxes or othe special levies on the highway uswill be made in approximately states during their legislative sessions in 1949, according to the National Highway Users Conference Agitation for more toll roads also expected to increase during the year in which the legislatures of a states except Kentucky, Louisian Mississippi and Virginia will meetin regular session.
- World Trade Conference TI 1949 Chicago World Trade Conference, which is the country's second largest annual gathering importers and exporters, will I held on February 28 at the Sherma Hotel. The meeting is sponsore jointly by the Chicago Association of Commerce and Industry and the Export Managers Club of Chicago It attracts delegates from all part of the United States and several foreign countries. Speakers at the 1949 session will include Secretar of Commerce Charles Sawyer.
- Where Premiums Go Unite States life insurance companion made investments totaling \$9,664 000,000 in the first 11 months of 1948 compared with \$7,723,000,000 in the same 1947 period. Investments in industrial and miscellandous bonds amounting to \$2,297 000,000, accounted for the bigges share of the total in the 194 period. Investment in government securities accounted for \$1,674,000 000. Ranking third was investment in public utility bonds which amounted to \$1,665,000,000.
- Dad Had It Tougher Twelv hours of work in 1948 compared with 30 hours in 1914 would pur

(Continued on page 43)



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TELEPHONE LINEMEN have the traditional 1 Bell System spirit of service that aims to "get the message through." They also have what it takes in the way of equipment and supplies.

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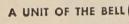


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ELECTRIC COMPANY

223 W. JACKSON BLVD. CHICAGO 6, ILLINOIS



Trends in FINANCE and BUSINESS

In 18 Years

There is both 1948 Immigration historic and eco-Into U. S. Highest nomic significance in the fact that immigration into

the United States during the fiscal year 1948 rose to the highest level since 1930. The total figure, according to a National Industrial Conference Board study, was 170,-570 for the year, of which 115,750 or slightly over two-thirds came from Europe. Of these almost half came here from either Germany, England or Italy. The biggest influx from a single country came here from Canada. **Immigration** from the Dominion totaled 21,794 persons.

More than half of the aliens who came to the United States last year claimed no occupation. Of those who did declare some occupation. clerical, sales, and kindred workers outnumbered any other group, with 15,298 persons. The other three classifications which ranked close behind were operatives and kindred workers (12,797); professional and semi-professional workers (12,619); and craftsmen, foremen, and kindred workers (11,019).

Thus, the Board observes, there have been some "notable shifts" in the distribution of occupational Although craftsmen and operatives together averaged only 7.9 per cent of the total immigrants between 1935 and 1939, they comprised 14 per cent in 1948. On the other hand, the number of domestic workers and proprietors, managers, and officials declined considerably on a percentage basis.

since records were begun in 1910.

Coal Mining Casualties At Record Low in '48

Fewer American miners lost their tons of coal pro-

lives in 1948 in proportion to the duced than in any previous year

This is the optimistic report from: the Federal Bureau of Mines which goes on to say that the fatality rate per million tons was 1.46 for bituminous coal and 2.54 for anthracite mines - both record lows and the combined death rate was 1.56 per million tons.

The nonfatal injury rate in coal mines was also at a record low in 1948. Such injuries totaled 54,100, or 83.10 per million tons. The previous low was in 1947, when 58,200 were injured and the rate was 84.62 per million tons. Other branches of the mineral industry proved less safe in 1948, however. In metal mines and pits, 125 men were killed and 8,200 injured during 1948, compared with 124 deaths and 8,180 non-fatal injuries in 1947. In nonmetal mines and quarries deaths numbered 85, as against 81 in the preceding year, and non-fatal injuries totaled 6,500 compared with 6,220 in 1947.

Push-Button Farming Comes Still Nearer

One still hears talk of rural electrification but not so persistently as was the case a dec-

ade ago. One reason may be that rural electrification is fast becoming an accomplished fact, not merely a national goal. According to the General Electric Company the number of farms in the country served by electric power has increased almost 25 per cent in the last three years alone. As a result about 74 per cent of all our 5,750,000 farms are now electrified.

This trend toward complete electrification is hastening the development of a host of specialized laborand time-saving electric devices for the farm. Among products in the development stage is the farm crop dryer, which combines a fan, motor, control, and a heat source such as an oil burner, and can be used on

corn, small grains, peanuts, cotton seed, rice and hay.

Another new development is the electric calf de-horner which seers the tissue at the base of the horn with little pain and no danger of infection. After three or four weeks the horn drops off. A water purifier, using a germicidal lamp, is another product of tremendous potentiality on the farm.

Looking farther in the future. General Electric hazards the guess that ultrasonics (high intensity sound) holds great promise in agriculture. Science knows, for example, ultrasonics can be used to homogenize milk, improve seed germinations, kill harmful bacteria and fungi in milk.

Phenomenal as Science Versus today's scientific Nature; An Old developments may Story — New Twist appear, nature has a sly way of fighting back. Take the case of DDT, the insecticide that was supposed to rid the nation of houseflies. Now it appears, according to papers presented before the American Association of Economic Entomologists, that the housefly builds up resistance to the power-packed

This became apparent during a laboratory test in Florida where a fly colony was given a DDT dose about three years ago and only five to ten per cent of the strongest flies survived. Succeeding broods were sprayed and by the time the fifteenth generation was reached, their resistance had doubled. The worst of it is, according to the reporting scientist, the surviving "DDT resistant" flies are tougher, darker, larger, and more active than their ancestors.

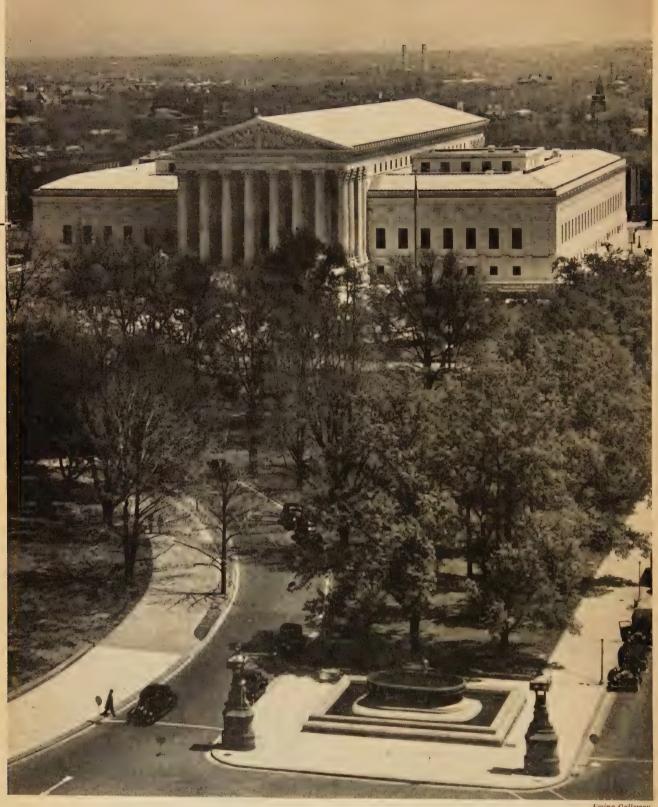
Factors That Contribute To Production

What are the factors that enable some foremen, supervisors and office bosses to get

more work accomplished than others? The University of Michigan Survey Research Center has been studying the habits of successful and unsuccessful supervisors, and has come up with these conclusions. Bosses with high production records usually are under less demanding supervision from their own supervisors and thus place less

(Continued on page 43)





"A blueprint of permissible patent activities has not been provided by the Supreme Court."

Ewing Galloway

Trustbusters Chart Sweeping Anti-Monopoly Drive

By

JOSEPH SLEVIN

LL of Washington's business headlines will not be written this year on the White House and Capitol extremities of Pennsylvania Avenue. Many will be genrated midway along that thoroughare—in the imposing Justice Department building—where federal rustbusters are now diagramming the biggest, and doubtless the toughst anti-monopoly drive in the nation's history. One of the principal argets of the campaign will be alegedly illegal patent operations.

This year the Justice Departnent's antitrust division has a milion dollar larger appropriation han ever before with which to vhittle down what it regards as ilegal patent combinations. Any doubts of the trustbusters intentions were dispelled last month when the tepartment moved against the \$8,-00,000,000 American Telephone nd Telegraph Company, asking the ourts to divorce A. T. & T. from ts billion dollar manufacturing subidiary, Western Electric Company, nd split the latter into three combeting companies.

Numerous Cases Pending

This is one of three dozen monpoly actions that the trustbusters expect to unveil in the first half of 949 aimed at both big and melium-size business.

Alleged patent abuses figure promnently in the A. T. & T. suit. The government charges that Western Electric makes and sells or controls lmost all telephone and telegraph quipment production in the United tates. To restore competition, the government asked the court to orler A. T. & T., Western Electric and the proposed successors to Western Electric to license their patents to all comers at a "reasonable" royalty. To make sure the newcomers will know how to use the patents, the government asked as well that necessary technical advice be made available.

The A. T. and T. case made headlines, as did the government's recent move to break up the "Big Four" meatpackers. But beyond these outstanding court cases—yet to be tried—few developments in this biggest-of-all antitrust drives have been treated as big news.

Bergson's Role

The government currently has over 100 antitrust cases in the courts. Sixteen involve important patent issues. Herbert A. Bergson, assistant attorney general in charge of the antitrust division, promised in January that "patent abuses will play a large role in our enforcement program." Harvard - trained Bergson has worked his way up in the department since 1934. President Truman appointed him to his current job last June; at a time, incidentally, when his employment outlook appeared anything but secure.

Patents have taken an increasingly large amount of the department's time in recent years. This, Bergson figures is because the courts have "whittled away" many other ways of evading antitrust laws. Many of the government's most important recent Supreme Court victories have been in patent cases.

The government has charged the defendants in these cases with abusing patent rights. The Constitution, of course, gives Congress power to grant inventors "the exclusive rights to their discoveries" for a limited time. The present law, substantial-

ly the same as the first one, passed back in 1790, gives the patentee an "exclusive" right to make, use and vend his 'invention throughout the U. S. for 17 years. Why then "patent abuses"?

"I feel," Bergson declares, "that when the patent system is used as a device to evade the antitrust laws, the evasion should be stopped. I don't think the Founding Fathers intended that patent owners should be permitted to use their patents in an illegal way."

While the A. T. & T. suit is the biggest patent case now in the courts, it is not the only important one. The government has charged E. I. DuPont de Nemours with monopolistic use of cellophane patents. This charge, incidentally, has resulted in DuPont's offering their production know-how to any wouldbe competitor. Thus far, although there have been lookers there have been no takers. In the fluorescent light industry, the government has brought patent charges against 10 companies, including General Electric, Westinghouse Electric, Corning Glass, and Claude Neon Lights. In the shoe machinery industry, it has a major case pending against the United Shoe Machinery Company, leading producer in the field.

Defendants Listed

In containers, the defendants are American Can and Continental Can companies; in colored films, it is Technicolor, Inc.; in rubber, U. S. Rubber Company; in arc welding, Linde Air Products Company; in carbon dioxide and dry ice, the Liquid Carbonic, Air Reduction, Pure Carbonic, and Wyandotte Chemicals corporations and the International Carbonic Engineering

Company. Other suits involve paint, plastics, cross recessed head screw and artificial denture industries.

The government has yet to win any of these cases, but the trustbusters point with obvious satisfaction to an impressive list of suits that, by antitrust standards, have recently turned out in the government's favor. They cover the television, titanium, flat glass, glass container, duplicating (mimeographing), salt, air brake, fluid filled cable, cast iron pressure pipe, gypsum, and lecithin industries. Among the defendants were Paramount Television, General Precision Industries, National Lead, DuPont, Libby-Owens-Ford, Pittsburgh Plate Glass, Hartford - Empire, Corning Glass, Owens - Illinois Glass, Ball Brothers, A. B. Dick, International Salt, Bendix Aviation, Westinghouse Air Brake, General Cable, General Electric, Phelps Dodge Copper, U. S. Pipe and Foundry, U. S. Gypsum, and American Lecithin.

Analyzed as a whole, these cases answer many questions about what trade practices the Justice Department regards as illegal on the part of patent holders. Many are practices against which the department has won court decisions in general antitrust cases before.

"Fuzzy" Legalities

Lawyers and patent holders frequently contend that the line between legal and illegal patent use is fuzzy, that a businessman can seldom be sure that he is on safe ground when patents are involved. The same criticism is commonly leveled against other features of the antitrust laws.

Bergson and his trustbusters believe otherwise. "While a complete blueprint of permissible patent activities has not been provided by the Supreme Court, and probably never will be," he says, "we believe the line between proper and improper use is fairly clear." What he means is essentially this: no lawyer or judge can sit down and list all possible improper patent uses; the line between legality and illegality can only be marked out gradually in court decisions.

Bergson does give patent holders some reassurance, however, by adding: "When we bring a case in a field where the law is not settled it will be a civil case and not a criminal case. We won't make law in criminal cases. Where the abuse is willful and the law is clear, we will bring criminal cases."

In a recent case, the Supreme Court ruled for the first time on the legality of an international patent cartel. DuPont and National Lead, who between them turned out 90 per cent of the titanium produced in the United States, had made patent licensing agreements with a number of foreign companies. They gave one another exclusive rights to certain markets and achieved worldwide regulation of titanium production and distribution. The Supreme Court found the agreements illegal — pure and simple.

Hartford-Empire Case

In the Hartford-Empire case, the department brought to an end the domestic glass-making machinery patent pool. Defendants were the 12 leading companies in the automatic glass-making machinery and glassware industries.

By 1938, Hartford had acquired more than 600 patents, the court found. These were merged with 100 Corning patents, 60 Owens-Illinois patents and a few others through cross-licensing agreements into a pool which "effectively controlled the industry." One result: 94 per cent of the nation's glass containers were made on machinery licensed under pooled patents.

Justice Owen Roberts interpreted the Supreme Court's opinion this way: the pool discouraged the invention of glass-making machinery, suppressed competition in the manufacture and sale or licensing of such machinery, and used a restrictive licensing system to suppress competition in the manufacture of unpatented glassware and to maintain prices of the products.

Justice Department lawyers regard the Hartford-Empire arrangements as an example of patent pooling at its worst. Nevertheless, Bergson insists that his antitrust division has nothing against patent pools per se. He points out, for example, that the automobile industry's patent pool is completely unobjectionable. Innumerable automobile patents overlap and the patent owners must license one another if technological progress is to continue. The auto pool is open

to any manufacturer. Each member receives a license under all the patterns in the pool—without restrictive conditions.

In addition to those who maked restrictive agreements to control the interchange of their patent rights the department also looks critically on patent owners who impose rea strictive conditions on their licent sees. Many of the trustbusters' rea cent court victories have been worn in such cases.

Specifically, the government has acquired court orders prohibitings the use of patent power to force licensees to buy unpatented materials from the patent holder (ties in sales), to force licensees to use only the defendant's patented equipment, to make only specified kinds or sizes of products, to maintain prescribed prices, to limit output to prescribed quantities, to maintain prescribed standards, grades or qualities, and to allocate markets.

Most of these orders were obtained with the consent of the defendants (consent decrees) in Federal District Court without recourse to litigation. In one case, the Supreme Court ruled in effect that requiring a licensee to buy unpatented materials from the patent owner is unlawful in itself.

The International Salt Company, largest domestic producer of salt for industrial uses, owns patents on two salt-using machines. The "Lixator" dissolves salt into a brine used in industrial processes; the "Saltomat" injects salt tablets into canned food. International required companies who leased its machines to buy from it all the salt and salt tablets used in the machines, although salt and salt tablets are unpatentable. The Justice Department asked an injunction against the lease arrangements and won the case.

Historical Trends

Not that the government always wins or always gets everything it wants. The government had prosecuted few patent antitrust cases until the mid-thirties but the trend has been going its way ever since. Yet the government, for example, has still to get a Supreme Court decision holding that the concentration of patents in a given field in the hands of a single owner

(Continued on page 23)

Static: Industry's High-Voltage

Hot Foot

Inadequate Protection Causes

Millions in Factory Losses

By LEWIS A. RILEY

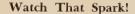
ISE city dwellers have learned by now to treat a taxicab doorhandle with the same respect they tender an open electric socket. Most discovered their unpleasant similarity the first time they reached for a cab's metal handle and were suddenly jolted by an electric shock. The source of this shock is nature's mischievous phenomenon — static electricity. It is the same jarring little spark that snaps off the finger of a man who shuffles across a deeppile rug and then touches an elevator button or a doorknob.

In taxicabs, static electricity — "static" because it is "standing still" as contrasted to dynamic electricity — accumulates from the friction of tires rolling on cement, then lies in wait for its first opportunity to reach ground. Since today's synthetic tires (among other reasons)

Meter records worker's tendency to store up static

have less conductivity than natural tires of former years, the patron who first touches the exterior

provides that ground. The result: a static jump. Curiously the spark is harmless in itself; discomfort comes from the subsequent action of jerking backward.



It is not the spark but the consequences of it that makes static electricity a devastating enemy of industry. Every year industrial losses from static-caused fires and explosions run into millions of dollars and dozens of lives. In some 50,000 plants across the country — notably those like flour and cotton

Life and property losses are only one evidence of static at work

round. The result: mills with inflammable dust and others where volatile vapors are itself; discomfort present — static electricity is a con-

stant hazard.

Among the thousands of industrial disasters attributed to static are such typical cases as these:

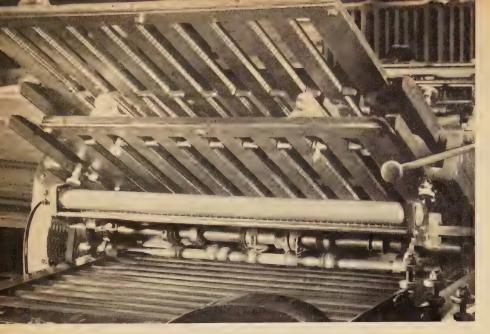
A Minnesota fibre plant suffered losses amounting to \$70,000 when a fire, ignited apparently by a static spark leaping from a bale-breaking machine, spread along the straw in a conveyor system, swept into the drying room, and was out of control a moment later.

In a Connecticut hat factory,

Static eliminator for belts made by Seedburo Equipment Co.







Center roller eliminates static on this folding machine. If power to eliminator is cut off, machine immediately jams. Installation by Takk Corp., Newark, O.

straw hats were being waterproofed in a rubber-naphtha solution when a workman, drawing apart freshly-dipped hats, suddenly saw the hats in his hands leap into flame, presumably from a static spark. Fire losses were \$5,000.

A Sly Saboteur

An Illinois farm machinery plant suffered fire losses amounting to \$250,000 when an employe who was wiping plow parts with a naphthadipped rag touched off a static spark when he thrust his hand in a 10-gallon can.

While life and property losses are the most spectacular evidence of static electricity's destructive nature, they are only part of the story. Static can also sap indus-

trial efficiency in slyer ways. The same electrical energy that sparks a fire is capable of creating extraordinary mechanical tensions which slow down, and sometimes jam or break, expensive machinery.

In paper mills, static-produced magnetism[‡] makes sheets stick together glue-tight causing slowdowns and interruptions. In fabric mills, it makes fiber ends stand stiffly upright thus roughening surfaces and at times buckling machinery. In thousands of factories and shops, its sudden, unexpected appearance in the form of a spark has caused workmen to jerk backward into moving machinery, fall from girders, and entangle arms in gears and wheels. Losses resulting from these

Excellent static safeguard: humidifier in International Business Machines plant



evidences of static at work can hardly be estimated.

Static electricity, as any high school physics student knows, is a common electrical phenomenon cres ated either by the separation of two unlike substances that have been in close contact, or by the tearing apart of liquid particles. A shoe coming off the rug, a tire leaving the pavement, factory belts meeting and leaving pulleys, steam and gases pouring from nozzles - such actions tend to build up a static charge. An individual shuffling over a wool rug can build the charge within himself to as high as 10,000 volts; petroleum flowing through pipes can build a charge at terminal tanks of 75,000 volts; trucks and buses can easily generate 40,000 volts or more. Industrial belts and pulleys have shot out five-foot sparks, indicating static charges of at least a million volts!

It's Not "Static" Long

Static electricity, as the name implies, remains inactive during the building-up process, then when grounded or discharged creates as spark varying in intensity with its accumulated voltage. Since it is the spark, of course, that can create havoc if combustibles are nearby, all methods of controlling static electricity within industry have as their purpose the carrying-off of charges before they have reached as spark-producing stage.

In recent years industry has learned a great deal about proper static control. It is known that static is most dangerous in dry atmosphere, because in damp weather or in factories with adequate humidity static electricity tends to be borne away before it reaches a dangerous voltage. has been learned that static accumulations on belts, nozzles, machinery and other likely danger spots can usually be prevented through the use of static eliminators and other control devices. The tendency of individual workmen to build up electric charges within themselves can be greatly minimized through the use of safety shoes with conductive soles and heels which allow static electricity to flow freely from the body to ground, especially if used in conjunction with conduc-

(Continued on page 36)





Against a possible M-Day standby orders for machine tools are out; for other industries conversion has been outlined

M-Day Planning As It Stands Today

By JACK ROBINS

HEN the United States was being drawn into World War II the imposition of government controls on the economy was a gradual process.

As a nation we were unwilling to admit that the European conflict was something that would involve us. Our planning for mobilization was, on the industrial as well as the military side, a crabwise sidling into reality. To an extent, this was true even after Pearl Harbor. In our toughening up for all-out battle we went from soft to hard.

That experience is relatively so recent that it is not hard to remember. First there was something called the National Defense Advisory Commission which was doing something vague in the way of studying the impact of foreign war on our economy. There was a Board of Economic Warfare headed by Henry Wallace, working mysteriously at something that turned out to be preclusive buying abroad, and some stockpiling.

By executive order, President Roosevelt set up an Office of Price Control and Civilian Supply under Leon Henderson. OPACS got under way without any really serious attention until it issued Price Control Order No. 7, in April, 1941, regulating combed cotton yarn. Since that affected cotton, the powerful Southern cotton bloc in Congress was on Henderson's neck immediately, bellowing with rage.

"General Max" Came Late

It was a long time before the subsequent OPA got around to "General Max," the overall maximum price ceiling. Even then Congress imposed specific strictures insuring 100 per cent of parity for farm commodities, and wages were left free of control. War had come before we adopted wage and manpower freezes.

Meantime the burgeoning problems of allocations and priorities were being handled on a progressively widening basis by a succession of agencies: the Supply, Priorities and Allocations Board, the Office of Production Management, the War Production Board. Finally the capstone was put on a pyramid of emergency agencies by creation of the Office of War Mobilization.

Next time — if there is a next time soon - the process will be different. It will, in fact, be almost the reverse. The big news in mobilization planning is that the current group of planners believe we will have to go from hard to soft in our controls. If their plans go through, a war crisis will bring an immediate tight clamping of controls on everything: prices, wages, materials, and manpower - an overall, blanket control first, and then a gradual working out of exceptions to ease the injustices of operating by rigid control.

Why? This calculation is based on the changed status of the American economy now as compared to the prewar 1939-41 period.

Economic stability obviously will be far greater a problem than it was in 1939. At that time we had

(Continued on page 44)

Photography Dons Overalls

URING the war a quiet drama took place one day in the lab. oratory of one of the nation's big armament plants. For weeks engineers had been trying to pin down the production bugs that were slowing down the efficiency of 20 mm. aircraft cannon. Turning finally to photography, the engineers hoisted into place a curious, new mechanism called a "Time Microscope," strung out batteries of flood lights and began photographing the split-second firing operation at the incredible speed of 3,200 pictures a second.

Shortly afterwards, the production flaws loomed up on the laboratory projection screen as clearly as if they had been blueprinted. With the firing slowed to a dead halt, engineers could see that the mysterious slowdown was being caused by vibrations in the ammunition belt as it sped through the cannon and by fleeting hesitations in the operation of the gas-recoil piston. The bugs thus laid bare, engineers were able before long to accelerate the cannon's firing rate a good 25 per cent over its original speed and, at the same time, greatly minimize the possibility of disastrous jams on the firing line.

This application of super-highspeed photography would have been impossible a decade ago, yet today it is only one of hundreds of extraordinary ways in which inProcesses And Products Are Being Speeded And Improved By Use of Modern Photography

By EUGENE W. NELSON

dustry is utilizing the camera to speed production, root out defects, boost efficiency, save money and make the factory worker's job easier.

The "Time Microscope" is one of several ultra-speedy, highly specialized cameras that are working for industry in a variety of engineering and research fields. It is peculiarly adept at uncovering secrets that cannot otherwise be seen. The big T-M readily clicks off motion pictures at eye-blinking speeds of 3,000 or more frames per second. By comparison, the Hollywood-style movie camera, with a top shutter speed of only 128 frames per second, is lumbering Step 'n Fetchit.

New Type Shutter

The secret of the "Time Microscope" and similar high-speed industrial cameras is a revolving prism which is synchronized with the film travel. Unlike the conventional open-close shutter, the prism directs onto the film as it darts over sprockets at 50 miles an hour. Travelling at this speed, a hundred feet of 16

mm. film pours through the camera in a mere one and a half seconds.

As the film moves toward the top speed of 50 miles per hour, lightt impressions on the edge mark offf each 1/120 second of time. Engineers are thus able to measure precisely the speed at which various operations take place. Furthermore, when the film is later projected att normal silent film speed (about 16) frames per second), time is quite literally magnified several hundred times. Split seconds are stretched into minutes; whirling machine: operations can be slowed to a trot, a crawl, or a complete halt. The "Time Microscope" also magnifies space: with fine details greatly enlarged on the projection screen. The flight of a bullet, the action of an electrical relay, the formation of a metal chip as the cutting tool peels it off a forging or casting-these and many other operations can be studied in minute detail.

One machine shop recently made a study of the action of a stream of cutting oil as it flowed over the point of a metal-cutting tool. These



Metal magnified 500,000 times by electron microscope



Eastman Kodak pho

Drawing detail transferred to metal by Transfax



Mourning dove caught in full flight by high speed camera

pictures, even though they had to be taken through a fog of spraying, steaming oil, proved the truth of a theory that cutting tool experts had speculated upon for years. On the projection screen, they watched the cooling bath of oil force its way up and under the chips of stainless steel curling away from the cutting tool. What was more important, they saw the liquid reach, then boil on the red-hot tungsten carbide tool tip! For the first time, this was visual proof that the oil was efficiently performing its job of removing heat from the tool's tip and so keeping the cutting tool from getting too hot and cracking.

High-speed photography has also

paved the way toward better and faster welding techniques. It has enabled researchers to analyze the actions of flames in internal combustion engines and thus help lick the problem of "knock" in automotive engines. It has revealed the source of nerve-shattering noise in a tele-typewriter, how air flows around airplane wing surfaces, why threads snapped in spinning and weaving operations on certain textile machines, and why electrical contacts and relays failed.

Another photographic process developed by the aircraft industry during the war makes it possible to reproduce engineering information directly from drawings onto

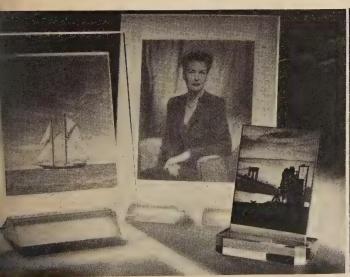
the metal patterns used in shops. The drawing is first photographed and enlarged or reduced as desired, then the negative is used to make direct contact prints on specially treated surfaces of small parts and sensitized metal sheets. Fifty hours of such photographic work can accomplish as much as 12,000 hours of re-drafting time.

Transfax Process

A similar photographic reproduction technique of even more recent development makes it possible to reproduce any drawing, or picture on metal, plastic and other firm, non-absorbent surfaces. To transfer a drawing, such as a shop layout, onto another surface by the "Transfax Process," the surface is first sensitized to light by being sprayed with a quick-drying solution. A transparent drawing is then placed in contact with this surface and exposed to strong light. The surface is flooded with a clearing solution, rinsed, and coated with a tough primer. Afterwards, the transferred drawing will not come off when the metal is bent, sheared, or even cut with an oxyacetylene blowtorch. Transfax faithfully and clearly reproduces lines as close together as .003 inch, making it possible to print quickly and cheaply complicated wiring diagrams on electrical equipment, make layouts of lines and working instructions on metal parts that are to be joined together, and also to put dials, labels, and nameplates on metal products.

High above the earth, air-borne cameras are also working for science

(Continued on page 24)





Correcting areas p

hree dimensional pictures in glass and technician with negative ready to combine with glass

The Economic Facts of Life And The Steel Industry

T THE outset, I should like to say that I am not pessimistic about the future of this country. I cannot make myself believe that the American people are so lacking in common sense as readily to permit any foreign importation to replace our long tried-out system of competitive free enterprise — a way of life, which I think all of you will agree is largely responsible for the growth and strength of the United States and which has resulted in a standard of living unequalled anywhere outside of this nation. Undoubtedly we must anticipate constant change in conditions over the world. That has been going on since the beginning of civilization. But such a gradual alteration of surroundings as time marches on does not require abandonment of fundamental American freedoms and principles.

What I should like to emphasize tonight is that the preservation of these freedoms and principles calls for eternal vigilance on the part of our people. In fact, it calls for much more than that. To permit the American people to exercise that inherent wisdom and sense of fairness which I am certain is their possession, the public must be told, and told again and again, the truth about our American economic system and its accomplishments. Men of standing and responsibility throughout the nation must be vocal on behalf of our American institutions.

More Government Trend

Today a number of individuals in this land appear to want more government in business. They seem to be of the opinion that the public interest will be better served by throwing overboard the determinations of the market place and the economic law of supply and demand, and by substituting therefor mandatory statutes and arbitrary regulations promulgated by govern-

By IRVING S. OLDS

Chairman, United States Steel Corporation.



Irving S. Olds

mental bureaucrats. Their conviction apparently is that government is far better qualified than business men to decide what should be the products of American industry, to whom they should be sold, and at what profit, if any.

Some of these seeming advocates of basic change in our established American economic order may be idealistic theorists, whose aims are sincere. Others may be simply ignorant. Still others may have sinister axes to grind. Whatever may be their inward motives, expressed or unexpressed, sincere or insincere, the effect on the country will be the same, should their views prevail. These men and women are

SPEECH OF THE MONTH

Made before the Manufacturers Association of Hartford County, Conn., January 20, 1949 now distinctly in the minority, I should say. I firmly believe that the primary task facing American businessmen today is to acquain the people of our country with the facts about business and with the great achievements and virtues of our American system.

Telling the full truth is always the most constructive way to meet any problem. Through education and sound argument a convincing case can and must be established to show the fallacies of those who would so establish a new order of things in the United States. In my judgment, this is the effective way to insure that this particular group of unsound advocates will forever remain in the minority.

Job For Each Business

How can this be accomplished Probably something of a constructive character along the educational lines I have suggested can be done by associations of manufacturers and similar organizations throughout the country. Unfortunately business embraces thousands of separate concerns and is not organized or capable of speak ing as an entity, although some commentators often talk of American industry as if it thought and acted as a single unit. Business organizations have not always been too influential with the public in the past. Irresponsible critics unjustly assail manufacturers associations as citadels of concentrated wealth and monopolistic privilege only concerned with reactionary policies and with the selfish interests of their members. Unfair and unfounded criticism of this kind should not be permitted to deter manufacturers associations from doing their duty and acting in such a way as they believe to be in the public interest. The heads of busi ness groups can be sound leaders and sincere statesmen.

(Continued on page 26)

FEBRUARY, 1949



Veteran Administration Photos

Ex-Colonel Richard Engel (left) operates a gunsmith's shop in Boston, Mass.

How Are Those Vet Businesses Doing?

By LARSTON D. FARRAR

PARLAYING \$16 and a hunch into a business enterprise that grossed more than a million dollars last year may seem improbable, but that's the success story of a former Army private who today is one of the leading businessmen of Montgomery, Ala. Ex-GI Hal Zimmerman's formula is simple: gumption, aggressive merchandising, and ambitious advertising.

Zimmerman's business venture began during the war at Maxwell Field, where from his Army pay he purchased some watches from a friend in New York. With the \$16 he had left after the purchase, he bought a small ad in an Army newspaper. That ad put Zimmerman in the mail order business.

Orders piled in from GIs; the profits from the first sales bought more watches and Zimmerman expanded. By the time he was mustered out of service, the fledgling mail order business was supporting national magazine advertising. Zimmerman, who had begun his

business in his bedroom, rented an office, then a floor, finally two floors in a downtown building. Today, with 42 employes and hundreds of items for sale, Zimmerman will soon need the entire building to house his fast-expanding mail order business. And in the pattern of Richard W. Sears, who began a mail order firm 63 years ago — selling watches, this ex-GI hopes someday to become the "Sears of the South."

500,000 Ex-GI Businesses

Hal Zimmerman's business venture is unique only in that his success has been particularly outstanding. The fact is that tens of thousands of other ex-GIs who have gone into business for themselves, are proving to be shrewd and highly efficient enterprisers. Estimates are that altogether about a half million veterans decided to launch their own firms when the war ended. Some have failed; far

more have succeeded — as government statistics already bear out.

Many people are surprised to learn that the vast majority of veterans who have gone into business have not take advantage of "GI loans" or government-guaranteed minimum monthly earnings. It is believed that about four out of five have been able to get financing from families or friends, or had saved enough money to start their businesses. Still others were able to borrow enough on their own resources.

Half Billion In Loans

As of October 25, 1948, the latest date for which overall information on GI loans is available, the government had guaranteed a total of 100,498 business loans and 48,034 farm loans. The dollar value of the business guarantees was \$319,628,877, while that of the farm loans was \$185,971,689.

Of the business loans, 25,151 had been repaid in full, and of the farm loans, 6,437 had been repaid in full. Exactly 4,630 veterans had defaulted on business loans and 432 had defaulted on farm loans, resulting in the Veteran's Administration having to make good the guaranteed portions of the loans. The VA considers this a phenomenally low failure rate - one default in 25 business loans. Especially when it is remembered that in normal times, one out of every five new businesses fails in its first year of operation and that two out of three fail by the end of the third year.

Ex-GIs have started orthodox



Ex-WAC Betty Husel part-owns trading post



Ex-Gl Bernard Mayer (right) built his rolling store from a surplus bus

businesses like advertising agencies, grocery stores, service stations, delicatessens and manufacturing companies, but a surprising number of the GI firms represent the application of entirely new ideas.

Grav M. Brown of Elkin, N. C., and Eugene Battles of Foxboro, Mass., started the Advertising Aviation Company, providing airplane towed advertising streamer service. It is only one of 50 or 60 such companies in America today, but the two veterans claim several distinctions that put them well into the profit column. They are one of the few concerns using the "snatch" pick-up system for getting streamers into the air; hence, they can haul bigger, more eye-catching streamers and still eliminate wear and tear on the flag-bunting cloth. Another point to which the two vets point with pride is the "continental waiver" they have obtained from the Civil Aeronautics Authority, permitting them to fly their streamers anywhere in the country, conditional only upon local authority.

Frisco Taxi Battle

About three years ago, 30 freshly discharged veterans decided to "give San Francisco better taxi service" with young cabbies who owned a share of the business. The vets incorporated the Veterans Taxicab Company in January, 1946, and finally, after eight months of fighting for a license, carried their first passengers in September. Several months passed

before they could bring the cab fleet up to full strength, but there have been no bottlenecks since. In 18 months the ex-GIs paid off the borrowed \$118,000 with which they had launched their business. Now profits are climbing despite the slump in luxury spending.

Up the Ladder - With Ladders

Frank F. King, James A. Gunter, Jr., and Homer C. Beyerly decided to climb the ladder of success with stepladders. The three Arkansas veterans organized the Southwest Wood Products Company in 1946, and began making canvasbottomed beach chairs. After noting the seasonal demand for such chairs, the men switched to stepladders. In its two and a half years of operation, the plant has expanded its payroll from three to 35 employes, its space from 1,320 square feet to more than 7,000 square feet, and its equipment from three electric power tools to 35 such tools plus other machinery. Last year, the company manufactured and sold 100,000 stepladders, a number of screen doors, and added other wood and cabinet work to its services.

Two vets — brothers Frank and Bill Beddor — are cleaning up in more ways than one in the dirty clothes business in what is called Dinky Town, just off the University of Minnesota campus, where they operate a self-service laundry called "The Tub." A profitable \$25,000 investment, The Tub's service is made to order for the

housewife or bachelor who brings clothes to be washed "while Uwait." There are 28 automatics washers, plus pressing machines. One favorite feature among colleges students: The Tub will iron and starch a man's "only" shirt while the waits for only 15 cents extra.

Exotic Enterprises

Ex-Sergeant Paul S. Hull sought his fortune in such places as East and South Africa, Brazil, Siam, India and China. Since the war, Hull has been on expeditions to each of those places to round up animals, birds and snakes, which he sells to circuses, zoos, aviaries and research laboratories. His most profitable item is the Indian elephant, which cost him \$500 to ship from India to the U. S., but brought him \$4,500 on the American market.

A bus driver before the war, Hull got the yen for world travel in the army and since demobilization has been in the United States only long enough to sell the animals after each expedition. From his seventh expedition last Spring he returned with \$35,000 worth of elephants, bears, monkeys, Siamese cats, boa constrictors, cobras and birds. Hull's skill at trapping wild game has been developed largely through trial and error methods. When he first went into business, his only experience had been an occasional hunting trip into the California backwoods.

A frozen foods store on wheels, built by Bernard A. Mayer, of Arlington, Va., with the help of a GI business loan, was so successful that he decided to give other interested veterans a chance to enter the same type of business. Last June, Mayer, a former AAF captain, obtained a VA-guaranteed loan to purchase a surplus bus from a transit company. He ripped out the seats and installed deepfreeze units for frosted foods. From his "Frostmobile," he sold frozen foods, baby foods and bakery goods from door-to-door and to the accompaniment of a musical horn sounding, "Merrily We Roll Along," the signal for housewives to begin filing through the traveling selfservice store.

Mayer has since employed an engineer to blueprint an improved "Frostmobile" and has contracted

(Continued on page 33)

Trustbusters Chart Sweeping Drive

(Continued from page 14)

hould be subject to the same rules is similar domination of physical acilities.

"It appears clear," Bergson has aid, "that patents should be treated no differently than any other property in the application of Section 2 of the Sherman Act. If anything, the monopoly based upon patents a more serious, since it constitutes a complete, legal monopoly."

Minimum Prices Stand

Furthermore, the department has not yet persuaded the Supreme Court to overrule its 1926 decision hat a patent holder may fix mininum prices for a manufacturing icensee. The court recently divided four to four against overruling the earlier decision.

Some of the consent decree provisions the department has obtained have never come before the Supreme Court in patent cases. This is true of the lower court orders forbidding patent holders to place quality or quantity restrictions on licenses. A quantity restriction lim-

its the number of items a licensee can turn out while a quality restriction limits him to products of a certain grade.

"We consider them illegal," Bergson says, "because they are in derogation of competition." The number of consent decrees the department has been quietly accepting indicates that many defense attorneys think Bergson is right on this point.

Several of the government's most notable patent victories have been achieved through consent decrees. The more bloodthirsty trustbusters take Bergson to task for accepting consent judgments instead of fighting, but the assistant attorney general plans to continue to sign them when he can get what he regards as a satisfactory agreement.

"I am firmly convinced," he says, "that in many consent decrees we get as good if not better relief than we get in many of our litigated decrees."

In the Libbey-Owens-Ford Glass Company and Pittsburgh Plate Glass Company cases, both defendants agreed to dedicate over 70 patents to the public interest and to license over 700 others to all applicants at reasonable royalties. They also agreed to give users of the patents their know-how at cost. Mr. Bergson's satisfaction is understandable, for the Supreme Court has shied away from ordering dedication. It amounts to licensing and the Court still is impressed by the property value of patents.

Patents Dedicated

The trustbusters, however, have won dedication agreements in other consent decrees including the A. B. Dick mimeograph settlement. The District Court ordered A. B. Dick to dedicate all its patents and patent applications on stencil duplicating machines, stencils, stencil duplicating supplies or raw materials, and on processor methods for making these items.

Bergson, who emphasizes that he is not "anti-patent," says the government will continue to demand dedication "where the particular patents themselves have been instruments by which the particular violation of the antitrust laws has been



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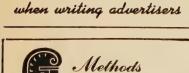
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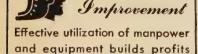
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accomplished." But where the patents have merely been "in the abused field," the government will only require compulsory licensing at reasonable royalties.

Explains Bergson: "The holder who has abused the patent has so pre-empted the field that a new licensee would not have a chance to compete, if he had to pay his own costs and a license fee to the defendant too. This raises his costs and lowers the defendant's."

"Our chief object," he adds, "is to create competition and there is no sense in giving it lip-service if you don't create the conditions for competition."

The Supreme Court has yet to show much enthusiasm for the department's view. The government asked royalty-free licensing when it broke up the Hartford-Empire patent pool. But Justice Roberts, who wrote the majority opinion, thought dedication an extreme penalty. Justice Hugo Black disagreed, declaring that royalty free licensing would

be the most effective way to restore competition.

Justice Roberts recalled that since 1877 Congress has frequently been asked to adopt compulsory licensing and since 1908 has often been urged to give the courts power to cancel patents which have been used to violate the antitrust laws. But Congress, Justice Roberts observed, has never seen fit to legislate.

The patent dedication dispute is one part of a more profound controversy. Justice Wiley Rutledge dissenting in the Hartford-Empire Case, pointed out that the patent laws (which are deliberately aimed at fostering monopoly) and the antitrust laws declare opposing national policies. "Whether the one or the other is wise," he said, "is not for us to determine. But their accommodation is one we must make."

Reconciling the two raises fundamental trade practice issues. The accommodation will require some very delicate adjustments, in and out of the courts.

Photography Dons Overalls

(Continued from page 19)

and industry. Army engineers, working with University of California technicians, have perfected methods for determining ocean depths near any shoreline within a scant few inches—all from photographs taken from altitudes of six miles or more. From the developed prints, engineers can also determine the exact contours of coral reefs, sand bars, sunken ships, and rocks, as well as the depth of the water over these obstructions!

One branch of aerial photography, called "aerogeology," is speeding the discovery of new mineral, metal, and oil deposits. cians, piloting relatively slow-moving planes and helicopters equipped with color motion picture cameras, can photograph soil and vegetation patterns in areas so mountainous that foot surveys would involve months of back-breaking work. Photography is useful here because streaks of certain soil and vegetation shades indicate the presence of ore-carrying rock beneath the soil. These patterns, incidentally, can seldom be identified by the prospector on foot. Visual observation from the air is also useless because the

human eye is faulty, nor can black and-white motion pictures show up the tell-tale color changes as de color photographs.

Still another branch of photography known as "photomicrography' reproduces and enlarges by as much as 5,000 times, the surface of metals Photomicrography has helped develop better automobile steels, better aluminum and magnesium alloys for planes; and hundreds of special alloys for better radios, television sets, refrigerators, and je planes.

Going further than photomicrography is the electron microscope, a recently-perfected instrument which shows the structure of materials in far greater detail than ever before A stream of invisible electron rather than a light beam is used to obtain initial magnifications of some 20,000 times. Then these magnifications can be increased to a much as 200,000 times by photographic methods.

Although the electron microscop is new to industry, it has alread revealed unsuspected facts about the internal structure of various metals and alloys. It has cleared

p baffling problems about the usting and wearing-away of metals; has been used to improve food avors, and has become indispensale in research work on solvents, ils, dyes, and rubber. Electronicrography is also being hailed as new and powerful weapon in the ight against cancer and the common cold.

Another new and highly promisng tool for industrial research, offiially labelled "high speed cineradigraphy," has just emerged from he laboratories of the Westingiouse Electric Corporation. Actully, this tool is a method for taking X-ray motion pictures at high peeds, and the apparatus used for he work took years to perfect. Ordihary X-rays, like those taken for nedical purposes, require exposures of several seconds or longer. In aking high-speed X-ray movies, nowever, each individual X-ray is given an exposure of only 10 millionths of a second, 2,000 times aster than an eye blinks. One hunfred pictures are taken per minute on ordinary motion picture film.

X-Ray Movies

In one case, an X-ray movie of a violent chemical reaction which took place inside a crucible showed what occurred when a mixture of pure powdered aluminum and iron bxide ("thermit", used in incendiary bombs during the war) was set afire. Thermit reaches a temperature of several thousand degrees Fahrenheit almost instantaneously.

The X-rays penetrated the crucible walls of metal lined with fire brick and showed in detail how the actual melting of the two ingredients took place. They also showed how the super-hot thermit burned its way through the bottom of the crucible and also through the heavy steel plate on which the crucible rested. A conventional high speed movie, used for purposes of comparison, showed only a shower of sparks with no details of the reaction whatever.

With X-ray movies, doctors may soon be able to see exactly what goes on inside the human body during digestion as well as the functions of other little-known organs. Shoe manufacturers can use the new X-ray eye to obtain a pictorial record of feet in running and walking actions inside shoes and so







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improve their products. Engineers are planning to use X-ray movies to learn what occurs inside automotive and aircraft engines during their entire cycles of operation. Physicians are even planning to rig up X-ray movie cameras to study the bodies of fliers in ultra-sonic planes to learn if their bodies are injured internally while flying at speeds faster than sound.

"Time Lapse" Photos

Photography has also made possible "time lapse" photography, by which a single motion picture frame is exposed every few seconds, every few hours, or perhaps every few days. It is thus possible to record on the screen in a few moments processes like the unfolding of a rose or the growth of a bean which may actually require days or weeks.

One of the latest of photographic miracles is "photosensitive glass," by which pictures can be produced inside glass. Photosensitive glass appears to be perfectly clear, but when subjected to photographic processes it reproduces permanently within itself a photographic image.

The new photographic glass is photosensitive because it has in it millions of tiny, light-sensitive par-

ticles which act like the coating o ordinary photographic paper. If sheet of this new glass is covere with a photographic negative an then exposed to ultra-violet light the particles inside the glass chang color, and a perfect print is preduced just as when printing an developing ordinary snapshots. Th picture is fixed by heating the glas in an oven, instead of soaking it i a hypo solution. Pictures can b made in many colors including blue, purple, red, yellow an brown. It is even possible to ge a "three dimensional" effect wit pictures in the new photosensitiv glass.

No round-up of cameras at wor would be complete without mention of how films are being used t Tests have showed tha films, either motion pictures o slidefilms, are among the mos rapid and effective methods of teaching. Thousands of training films were made during the war films that explained how to aban don a ship, how to take a machin gun apart, how to weld, how to jerk the engine out of a tank, how to do everything essential to run ning a war. Now, educators every where are turning to films to teach people everything from the classic to how to sell vacuum cleaners.

Economic Facts of Life

(Continued from page 20)

Each of us as an individual has a distinct responsibility to do his part in bringing home to the public the true story of American business. Otherwise, how can we answer effectively the false accusations which are constantly being hurled at us? Otherwise, how can we meet the threat in days of peace of a planned and controlled economy? Such a step would be the beginning of the road to a socialized state. Certainly each industrial concern properly can tell the business facts of its life to its foremen and other employes. Certainly each industrial concern properly can bring its story to the attention of the senators of its state and to its representative in Congress.

Certainly each industrial concern can do a great deal toward telling the people of its own community of its own activities and achievements and of the benefits to the whole American people of the American business system. This can be accomplished through various media, such as public ad dresses, press releases, advertise ments, radio messages, motion pictures, and in other ways.

A general misunderstanding ap pears to exist about the extent o current corporate profits. Let me take United States Steel Corpora tion as an illustration. We have been charged with now realizing profits which are characterized a 'exorbitant" and "of a record breaking character." Such an ac cusation is without foundation in fact. Even if we treat dollars a being of the same buying value throughout the years, which o course is false, the dollar profit of the steel corporation were highe in some earlier years than in 1948 But the important fact, overlooked by many of our critics, is that the ollar today has a buying power around half what it was only a w years ago. Our profit for the rst nine months of 1948 repreented a return of only five per ent on sales. Our shipments of eel during 1948 were the largest our peacetime history. Naturally ne profit of the steel corporation 1 1948 — a record peacetime year or shipments and sales - was irger in dollar amount than in arlier years when our sales were t a lower level. But despite this uge steel production during 1948, he income of the steel corporation n the basis of a percentage of ales was the smallest for any year f anywhere nearly comparable ates of operation in United States teel's entire peacetime history.

Profit 5% Of Sales

Many people share the view that he lion's share of what a corpoation receives from sales goes to he owners of the business. How ar from the truth is such an asfumption! In the case of United tates Steel Corporation, direct embloyment costs took 42 per cent of our sales dollar during the first nine months of 1948. The cost of ourchased goods and services acounted for 40 per cent additional. Taxes were the next largest cost, aking approximately 6.5 per cent of our sales dollar. The next largst cost item is the amount set side for wear and exhaustion of acilities. That depreciation item ook six per cent of the sales dolar. Interest on our long term debt epresented ½ per cent. After takng care of all of these necessary osts, there remained only five per ent of the sales dollar for the paynent of dividends to our stocknolders and for reinvestment in the ousiness. Is that the lion's share? Certainly not. In contrast, paynents to or for employes during hese nine months were more than 4 times the amount of the divilends paid to stockholders.

All of us have heard that prices in general are now too high. We indoubtedly would have a sounder economy today, if prices and costs had remained at a lower level. However, higher prices simply reflect higher costs of today, as well as the devaluation of the dollar which has taken place since 1933. Certainly the manufacturer cannot fairly be held responsible either for

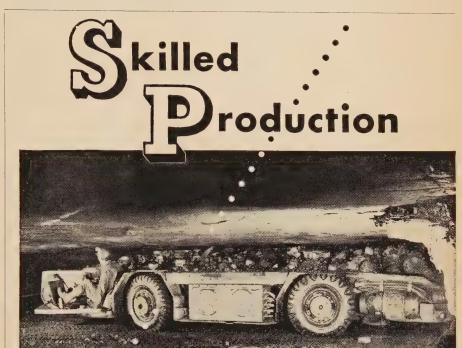
such higher costs or for such monetary debasement.

For some time past we have been told that wages can be raised generally without advances in prices. That theory has been advanced in recent days both by government officials and by labor leaders. I hardly need to point out how false and absurd is such a general contention.

The only continuing source a manufacturer has out of which to pay wages and other costs is the money which he receives from the sale of his products. If costs go up and threaten to exceed his sales

receipts, or to wipe out or endanger his profit, he has no alternative other than to advance his prices, if this be possible of accomplishment. Have you ever stopped to consider that labor constitutes by far the major part of the entire cost of any manufactured product? I cannot establish the exact percentage by direct proof, but I am willing to venture the guess that if taxes are left out of the calculation, labor along the entire production line accounts on the average for at least 85 per cent of the price of American manufactured products.

Our direct employment costs dur-





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ing the first nine months of 1948 took 42 per cent of our sales dollar. For the 20-year period, 1928 to 1947, the percentage has been approximately the same. Any general wage increase in the steel corporation, as well as any other substantial advance in our costs, necessarily has a direct relationship to the adequacy of our steel prices. While we would much prefer not to be obliged to advance prices and thus mount to a higher inflationary platform, we cannot escape from the mathematics of our business.

Higher Wages - Higher Prices

Since V-J Day the industry of the nation has experienced three rounds of general wage increases, followed in each instance by higher prices for most products of industry. Certain labor leaders may be setting the stage for a new fourth round. If they should be successful, I do not see how this country can avoid a still higher general price level with further inflationary dangers for all of our people. In that event, the recent trend downward in the cost of living index will prove to have been of short duration.

When in the past a new round of

wage increases and other advancing costs has forced the steel corporation to raise its steel prices, the charge has been made that we took advantage of higher labor costs and unduly raised our prices so as to obtain all that the market could bear. Although plausible to some, such an accusation is faulty in that it completely overlooks the fact that the total cost of the goods and services which we must purchase from others is almost equal to our total employment costs. As wages advance across the country, industry by industry, so do the prices of the goods and services purchased by United States Steel from these other industries. To illustrate, we have all learned by experience that higher wages to railroad employes soon result in higher freight rates. During recent years each increase of a dollar in our employment costs has soon been followed by an increase of about a dollar in the cost of our purchased goods and services.

Speaking generally, I should say that further increases in the nation's employment costs without offsetting price increases can be had only by seriously endangering the life of the golden goose. Business is a risky

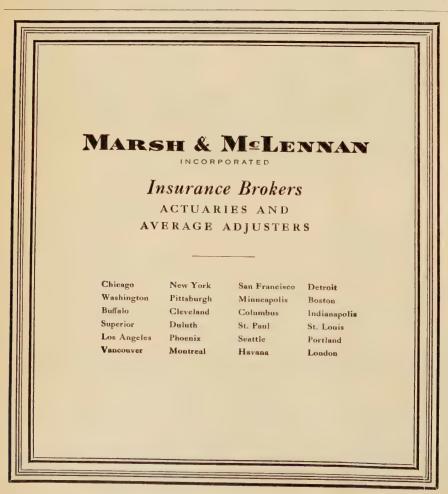
pursuit. Those who subject the selves to such risks are rightly titled to the expectation of a f profit, when conditions are favor able. Often too little consideratt seems to be given by critics of be ness to the legitimate interests. stockholders.' Their savings made possible the existence of America United States Sta corporations. Corporation is a publicly own concern. It has 230,000 stockhoo ers, located in every state of t The average holding union. common stock of the corporation only 52 shares. No one can fair question that our stockholders as the owners of other businesses a entitled to insist that their response tive concerns be operated in su. a way as to show a reasonal profit, if possible, especially att time when operations approa maximum capacity. Industry shou not be so denuded of profit during days of good business as to becor unattractive to future investors.

Nationalization Threat?

Since the President's recent sta of the union message, much h been said about a possible thre contained therein of the gover ment entering the steel busines While that may seem a remote po sibility, I should not be surprise to learn that the eventual nationa zation of the steel industry alor proposed British lines is in th mind sof some of our critics. I dustry should be alert to the pos ble firing of an opening gun in long range program for the ent by government into what has her tofore been regarded as priva business.

We are told that the steel indu try refuses to expand its facilities that the steel industry purposely holding down production so as maintain present high prices. What are the facts?

The steel industry does not exist as a unit, which can say "yes" of "no" to any nationwide expansion proposal. On the contrary, it made up of many separate, independent competitive steel companies, each running its own affair Each one of these separate companies must decide for itself whether or not it will expand or moderning its facilities, and if so, where, how and to what extent. It must be apparent that there cannot be a industry decision about increasing



he steel-making capacity of the ountry by 10,000,000 or 15,000,000 ons a year, as has been proposed by certain government economists in what seem to me to be purely heoretical grounds. Unless the fedral government intervenes, such a arge expansion can only come bout through individual construction programs by individual companies adding up to such a total figure.

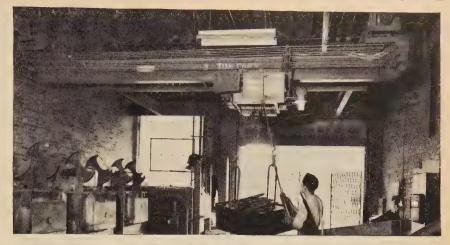
Steel prices are among the least nflated of all present prices. Prices or iron and steel products would, or example, have to be increased by more than one-half above those how quoted in order to achieve heir pre-war parity with farm prices.

How false and ridiculous it is to ccuse the steel industry of delibrately holding down steel production to sustain existing prices or or any other reason. The steel ndustry, week after week, has been perating at almost 100 per cent of ts steel-making capacity. In 1948, he industry shipped 65,000,000 tons of finished steel products. I am nappy to say that this constitutes record high production for any year, wartime or peacetime, in the history of the industry. That proluction performance in all fairness entitles the members of the steel ndustry to high credit for a job well done, and not to criticism or ibuse.

Big Private Expansion

Critics of the industry talk at ength about the alleged insuffiiency of the nation's steel capacity. To the uninformed it is made to appear that the members of the teel industry are "do-nothings"; hat they are blind to the growth n the population and to the naion's increasing steel needs. Let's ook at the record. Since V-J Day, period of little more than three years, the various members of the teel industry have voluntarily emparked on construction programs to ncrease and improve their steeloroducing and finishing facilities, which add up to a total cost in excess of \$2,000,000,000. Can any fair-minded critic say that the expenditure of that vast sum of money on new plants and equipment evidences a "do-nothing" attitude, or a disregard of the public interest, or of the steel needs of the nation? The construction and improvement

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program of United States Steel Corporation alone, adopted since V-J Day and now being carried to completion as rapidly as possible, calls for the spending of more than \$900,000,000. To give you a perspective of the materiality of that sum, perhaps it will suffice to mention that the net book value of the entire plant and equipment of United States Steel at December 31, 1947, amounted to \$940,000,000.

What the users of steel throughout the country are interested in is actual steel production and not a theoretical capacity figure. In 1929,

the United States had a total steelmaking capacity of 71,400,000 tons of ingots. Ten years later, in 1939, that capacity had grown to 81,800,-000 tons of ingots, an increase of more than 10,000,000 tons. now after a further lapse of ten years, this country had, as of January 1, 1949, a capacity of 96,120,-930 tons of ingots. Nearly 5,000,000 tons of ingot capacity have been added in the brief period since To summarize the steelmaking capacity of the nation has increased nearly 15,000,000 tons during the past 10 years, a growth of

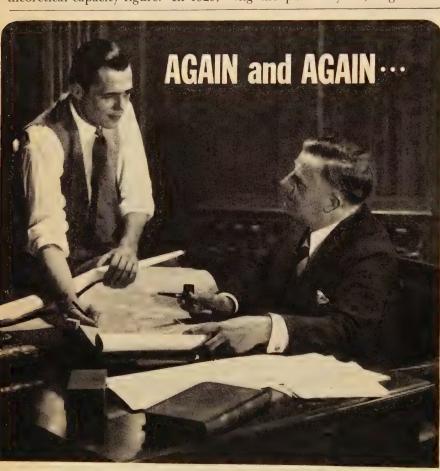
17.5 per cent. Plants which will add 2,000,000 tons of further steep making capacity are scheduled for completion in 1949. About 600,000 tons of this additional steel capacity, which is expected to come into operation during 1949, will be implants of United States Steel. The increase of 15,000,000 tons of steep making capacity during the pass 10 years is almost equal to the total present capacity of the entire British steel industry.

Additions Would Use Steel

Building further new steel mill at this time is bound to consume large amounts of steel of the kind now in short supply. Such new mills cannot be constructed and placed in operation short of two or three years. By that time I am hopeful that the present unbalance between steel demand and supply will have been adjusted. If the proposed mills are to be of a suffi cient size to meet the projections of the government economists, a serious problem must be met in the way of adequate raw materials and a sufficient supply of skilled labor to operate these large new plants. At times during 1948, the members of the steel industry were unable to operate their steel plants at full capacity, one of the principal reasons for this state of affairs being the scarcity of satisfactory raw mate-

Construction and equipment costs are at least double what they were a few years ago. Maybe the taxpayers will be asked to foot the bill for new steel mill construction, regardless of the soundness and necessity of the individual projects.

My references to United States Steel Corporation and to the steel industry have been for the purpose of citing specific illustrations of the difference between facts as they are and fancies that are current. 'I suspect that there are similar divergencies in other companies and other industries. I have greater respect for the good will and common sense of the American people than I have for many of the stories that reach the general public from day to day. For that reason I conceive that opportunity and duty are open to American business men to acquaint their neighbors with the facts as they are and the truth as it is. I am hopeful that the truth will prevail.



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*HE competitive ability that enabled the Gibson Refrigerator ompany to invade a well estabshed industry during the depreson years of the 1930's and to capare an increasing share of the total usiness in recent years, is expected prove of outstanding value to be company with the return to uyers' markets in major home appliances.

Since the end of the war the ompany has expanded its producon capacity substantially by the equisition of another company and nrough the enlargement and imrovement of its own plants. The ostwar program has included exensive improvements directly afecting plant efficiency and the cost f production. These, too, will ave an important bearing on the ompany's success in meeting the iff competition created by the ntrance of new manufacturers in ne appliance field.

Organized in 1908

Gibson Refrigerator Company as been in business since 1908. Intil 1930 the company manufacared ice boxes, but in the latter ear, when the great depression was ust getting under way, Gibson egan to manufacture electric rerigerators. Despite the difficulties f the times and the fact that a umber of refrigerator manufacturrs already were well entrenched, bibson gradually improved its posiion in the industry and, beginning vith 1939, made rapid strides until he war halted production of such oods for civilians. In 1941 the ompany produced 3.7 per cent of he refrigerators manufactured in he United States, against 2.91 per ent in 1940, 2.98 per cent in 1939, nd 1.25 per cent in 1938. In 1947 his ratio had increased to 3.88 per ent, and in 1948 the ratio was stimated at close to five per cent xclusive of the sales of the subidiary purchased during the year. or more than six per cent including the subsidiary.

A major factor in this progress was the company's production of refrigerators for sale under the private brand names of large retail stores, chain stores, and cooperative buying organizations representing individual stores. In 1937 private brand models represented approximately 40 per cent of total refrigcrator sales, and the percentage increased steadily until 1941, when 50 per cent of total sales were through these outlets. After the end of the war the company continued to allot its output about evenly between Gibson models and private brands.

Brand Customers

Private brand customers include Associated Merchandising Corporation, representing about 25 major department stores; Butler Brothers; The Cussins and Fearn Company; Goldblatt Brothers, Inc.; Firestone Tire and Rubber Company; Gamble-Skogmo, Inc.; Hibbard, Spencer, Bartlett and Company; Spiegel, Inc.; Western Auto Supply Company of Los Angeles, and the George Worthington Company.

While the manufacturing profit on private brand models is less than that on the company's own brand, the private brand business has a number of compensating advantages. The selling effort expended by the merchandisers of the private brand merchandise assures a wider market for the company's products, at no cost to Gibson for advertising and with little selling expense. The fact that orders for private brand lines generally are placed well ahead of delivery dates facilitates the stabilization of production and thus gives better control over manufacturing costs not only for the private brand units but for the Gibson line as well.

In 1938 the company began the manufacture of electric ranges, and







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immediately after the war a line of home freezers was added. The latter are the vertical type and are identical in appearance to the refrigerator line. The "Gibson" lines are advertised nationally and sold through some 75 distributors.

Gibson and a number of other companies invested in and lent money to a small producer of sheet steel, the Phoenix-Apollo Steel Company, in 1947, in order to increase their supply of the scarce commodity. Gibson acquired additional production facilities for refrigerators and ranges in December, 1947, with the purchase of the Belding, Mich., plant and warehouses of the Murray Corporation of America. Early in 1948 the company purchased for \$1,800,000 the Coolerator Company, Duluth, Minn., a manufacturer of electric refrigerators and one of the largest makers of farm freezers, which is now operated as a whollyowned subsidiary.

The effect of these acquisitions is indicated by the company's \$60,000,000 production goal for 1949, with an output of more than half a million refrigerators, ranges, and freezers. In 1941 production was 135,151 refrigerators and 6,900 ranges.

In addition to the Coolerator plant in Duluth, plants are owned in Greenville and Belding, Mich. Postwar plant improvements at the Michigan units have included new warehouses, new porcelain furnaces, new presses, new insulation processes, new conveyor systems, and a complete new engineering laboratory of 25,000 square feet. New trackage and shipping facilities are also being added.

Capital Adequate

A notable feature of the expansion and modernization program is the fact that it was accomplished without new capital financing and without ill effect on working capital. At the close of the 1948 fiscal year on September 30, the company's balance sheet showed current assets of \$14,232,967, including cash of \$6,298,423, while current liabilities aggregated \$7,534,734.

Total assets of \$18,148,460 on September 30, 1948, were more than \$10,000,000 larger than the prewar figure. Fixed assets were carried at net depreciated value of \$3,587,593. Under other assets the company carried an investment of \$7,225 in capital stock of a supplier,

presumably the Phoenix-Apoll Steel Company, and \$564,784 in notes receivables from the supplier Against these two items, aggregating \$572,009, a reserve of \$300,000 had been set up for possible loss.

From 1909 until the early 1930's Gibson Refrigerator Company operated at a profit each year. Sales began a steady improvement in the middle 1930's that carried through until the war, with the exception of a sharp decline in 1938. From \$1,781,944 for the fiscal year ended July 31, 1935, net sales climbed to \$8,792,624 in 1941. War workbrought a sharp increase in sales in 1943 and 1944.

Steady Profits

After reporting a net loss of \$281,049 for the 1935 fiscal years the company regained a profitable status in 1936, and since that time has reported a profit each year except for 1938 and 1946. A loss of \$43,276 for the 1946 fiscal year was attributed to reconversion and modernization costs, and to the effects of the steel strike and short ages in other materials.

Both sales and earnings were at record peaks in 1948, reflecting in part the acquisition of the Cooler ator Company as well as the suc cess of Gibson Refrigerator in boost ing its own production. Reporting on the basis of a new fiscal year ending September 30, 1948, the company disclosed net sales of \$47, 659,023 and net earnings of \$3,766, 884, the latter equal to \$6.28share on the capital stock. In the fiscal year to July 31, 1947, ne sales were \$22,278,682 and net earn ings amounted to \$2,153,800, equa to \$3.59 a share.

Capitalization as of September 30, 1948, consisted solely of 600,000 shares of \$1 par value stock. No bank loans or other debt excepturrent items was outstanding of that date. Earned surplus amounted to \$7,639,219. Reserves of \$2,374,507 consisted of \$2,034,506 for service warranty of products, \$300,000 for future decline of inventor prices, and \$50,000 for loss on repossessions.

All of the capital stock was held by the Gibson family until 1945 when 247,140 shares were sold to the public by principal stockhold ers. Management interests continue to hold a majority of the stock, now listed on the Chicage ock Exchange and selling around 9 a share.

Following the public offering f shares in May, 1945, the stock as placed on a 60 cent annual ividend basis, with quarterly ayments of 15 cents each being hade on July 30 and October 30, 945, and January 30 and April 0, 1946. The latter dividend was he last paid until January 31, 947, when distributions at the 5 cent quarterly rate were reumed. During 1947 an extra of 5 cents was paid in July and a pecial dividend of ten cents in December, bring the total for the alendar year to 85 cents a share. ast year the dividend payments otaled \$1.25 a share, including an xtra of 65 cents paid in September.

Vet Businesses

(Continued from page 22)

with the Linn Coach and Truck Corporation to manufacture it. The first rolled off the assembly line arly last Spring, and "Frostmopiles" are now produced at the late of one a week. Veterans who place orders are able to obtain rucks within four or five weeks.

The initiative of a former AAF aptain, combined with an assist rom a GI business loan, has provided Mississippi banks and businesses a new protection service against payroll robberies. Edwing all the Magnolia state, convoying money and other valuables for businesses all over Mississippi.

Now Operates Statewide

Humphreys, taking a guaranteed government loan of \$3,000, added some of his own capital to the venture and bought armor plate and other equipment to outfit a oullet-proof car. The first vehcle was built in Atlanta, Ga. Later, members of his firm built a second one, primarily for convoying paycolls. His two cars and his armed guards handle deposits for business houses, bank-to-bank shipments, money shipments for express and post offices, and payrolls. He also provides a complete paymaster servce for clients. He started with four accounts; today, he has hunireds.

Five brothers – all veterans of

2 choice Chicago industrial plants FOR SALE OR LEASE

Both these buildings were constructed in 1920 for Hart Schaffner & Marx, who still occupy them. Because Hart Schaffner & Marx has purchased larger quarters consolidating all clothing manufacturing operations under one roof, these fine properties are available for immediate purchase or lease, with possession on or before December 31, 1949.

These plants are ideal for the Needle Trade, chain store headquarters, executive offices for a large corporation, or any other operation where high

floor loads are not required.

Both buildings are three stories, located a few miles west of Chicago's loop, in a district offering an abundance of labor from the immediate neighborhood.

Originally there were three Hart Schaffner & Marx factories, but one of them was sold before this ad could be prepared. This in itself is an indication of the value being offered.



This plant, located on Cermak Road, has three stories. Each floor provides 33,406 square feet of space. The basement has 7,726 square feet — a total of 108,000 square feet. The ground space totals 42,000 square feet.



This plant, located a few blocks north on Tripp Avenue, also has three floors, each of 22,927 square feet area. The basement has 2,340 square feet — a total floor area of 71,506 square feet. The land area totals 40,630 square feet.

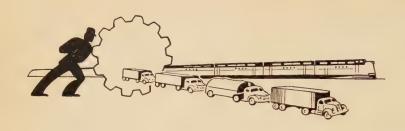
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including photographs of the buildings, floor plans and other information.

We have prepared a special portfolio describing these properties in detail. If you are interested in either or both of them for industrial or investment purposes, the complete portfolio will be mailed to you immediately. Please request it on your company letterhead.

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RAndolph 6-404

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PHIPPS INDUSTRIAL LAND TRUST—Owners

World War II — obtained the largest GI business loan ever negotiated in Massachusetts to buy the A1 drews Baking Company in Worcester, for \$50,000. The brothesput up \$10,000 and the lending agency advanced \$40,000, of which the Veterans Administration guaranteed \$16,750. All were connected in some way with cooking, baking or quartermaster work in the Army service. The business is reported "doing well."

Mushrooms Pay

A veteran's mushroom business started a year ago with the help coan GI business loan, proved so successful that it promptly grew from 2,200 square feet of planted mush rooms to 10,000 square feet. The veteran and his wife — Mr. and Mrs. Dominic L. Lamonica, of Oakland, Calif. — at first worked alone picking and sorting mushrooms As their business expanded, these took in a partner.

Lionel O. Cota, a New England veteran whose legs were paralyzed in an accident in the Pacific, i operating a thriving photograph studio from his wheelchair in Lett anon, N. Y. Aided by his wife, former government nurse whelearned printing and developing Cota specializes in photo enlarged ments and portrait sittings.

.

Some Failed

It is true, of course, that not all veterans have escaped unscathed in the business world. Take the case of Jack Breeden, the first G to get a VA-guaranteed business loan. It was in July, 1945, that he waded through a mass of govern ment red tape to become the first World War II veteran to enter business on his own with govern ment aid. He went into the whole sale meat trade in Fairfax County Va., but at a very bad time. Months of price control, black-market open ations, gasoline rationing and "ties in" sales hog-tied him, businesswise He sold his new equipment, paid off his GI loan and went his way Today, he tends bar and comments philosophically, "I just entered the wrong business at the wrong time.'

Fortunately, most veterans have had better luck—luck incidentally that was largely composed of initiative, imagination and hard work.



INDUSTRIAL DEVELOPMENTS

IN THE CHICAGO AREA

NVESTMENTS in the construction of new plants, expansions of xisting facilities, and the purchase f land and buildings for industrial urposes in the Chicago Industrial rea totaled \$6,432,000 in January, 949, compared with \$12,126,000 in anuary, 1948.

Kaiser-Frazer Corporation has purhased a 10½ acre site on which it vill construct a 218,000 square foot arts and accessories depot. The ite is on the south side of Belmont venue, east of the Soo Line tracks a Franklin Park. Edwin E. Hartich and Son, contractor; Wilbur E. Howett and Company, brokers.

Sunbeam Corporation, 5600 W. Coosevelt road, will construct anther unit adjacent to its present lant. The structure, which will be nore than 700 feet long, will conain approximately 133,000 square eet of floor space. Campbell Lowie Lautermilch Corporation, genral contractor; Olsen and Urbain, rchitects.

Johnson Motors Division of Evenude Corporation of Milwaukee will onstruct a 60,000 square foot adlition to its plant in Waukegan.

Kraft Foods Company, 500 N. eshtigo Court, will construct a processing building, which will conain about 7,000 square feet.

Chicago Tube and Iron Combany, 2531 W. 48th street, is contructing a one-story, 14,000 square oot addition to its plant. Fox and Fox, architects.

Standard Oil Company of Indina will construct a high pressure aboratory adjacent to its refinery in Whiting, Ind.

Shotwell Manufacturing Comoany, 3501 W. Potomac avenue, is constructing a five-story addition to its confectionary plant. Lee A. Bailey, architect; W. H. Lyman Construction Company, contractor.

Major Foundry Company, 2001 N. Major avenue, has purchased a two-acre site in Franklin Park on which a one-story building containing approximately 25,000 square feet of floor area will be built.

Wells Gardner and Company, Inc., 2701 N. Kildare avenue, manufacturer of radio receivers, has purchased 126,000 square feet of property at the northeast corner of Schubert street and Kildare avenue.

Henri Fayette, Inc., 1616 N. Mozart, manufacturer of greeting cards, has purchased the four-story building at the southwest corner of Armitage and Fairfield avenues. Alex Friend, broker.

Teletype Corporation, Division of American Telephone and Telegraph Company, Wrightwood avenue and Southport street, has purchased an additional building at 1257 W. Fullerton street.

S & C Electric Company, 4435 N. Ravenswood avenue, will construct a one-story brick and concrete building at 6555 N. Ridge avenue. Engineering Systems, Inc., architects.

Queen Ribbon and Carbon Company, 305 W. Lake street, has purchased the two-story building at 3838 N. Clark street to which it will move its general offices, manufacturing and warehouse facilities in this area. Arthur Rubloff and Company, broker.

Precision Welding Manufacturing Company has built a one-story plant at 5160 W. Homer street.

T. C. Arndt Sales Company, 1501 E. 72nd street, steel fabricator, has purchased a 30,000 square foot site PLASTIC DIPPING COMPOUND

7,500 lbs. Cellulose Acetate Butyrate Hot Dipping Compound packed in cartons. Suitable for coating tools, dies, etc. for protection against corrosion. Offered to highest bidder. Samples'on request.

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at 1050 E. 95th street on which it will build a one-story, brick and steel plant. Johnck and Ehmann, architects; Campbell-Lowrie-Lautermilch Corporation, general contractor; J. H. Van Vlissingen and Company, broker.

Master Spring and Wire Specialty Company, 5546 N. Harlem avenue, manufacturer of coils and springs, is constructing a plant in River Grove.

Ansell Simplex Printing Company, 2844 W. Chicago avenue, will construct an additional building which will contain approximately 12,000 square feet of floor area. Freevol Smedberg and Company, general contractor.

Union Bag and Paper Corporation is building an addition to its plant at 4500 W. Palmer avenue. A. L. Jackson, general contractor.

Materials Handling Equipment Company, 5724 Armitage avenue, will construct a one-story brick and concrete warehouse.

St Charles Manufacturing Company, St. Charles, Ill., has purchased another plant at 300 S. First street to which some of the company's operations will be moved.

Acorn Wire and Iron Works, 5912 S. Lowe avenue, has completed an addition to its plant.

United Chemical and Organic Products Company, Division of Wilson and Company, packers, will construct an addition to its plant in Calumet City, Ill.

William Frank and Company, 2033 N. Clybourn avenue, will construct a one-story brick plant adjacent to the E. J. and E. railroad in Barrington. The building will bo 50 by 180 feet and the company will move its entire operations to that plant when it is completed.

Popular Mechanics Company publishers of Popular Mechanics Magazine, which operates a large printing plant at 200 E. Ontarid street, has purchased an additional four-story and basement building an the southeast corner of Erie and St Clair streets. Bowes Realty Comn pany, broker.

American Molded Products Com pany, 1644 N. Honore street, plass tic molders, is constructing a threes story addition to its plant.

Duer Tube Bending Companyy 2810 Madison street, Bellwood, will construct a 7,200 square foot addit tion to its plant.

Sheffield Foundry Company, 2070 N. Clybourn avenue, is building arr addition to its plant. The company produces gray iron castings, pumpss valves and machine parts.

National Tea Company, 1000 Crosby street, has purchased the surr plus war plant at the corner of Archer and Cicero avenues. This plant, which contains 800,000 square feet of floor area, was constructed in 1942 for use by Studebaker Corp oration for the manufacture of aviation engine parts. After the war: the plant was leased by Western Electric Company. The plant is a windowless type structure, complete? ly air-conditioned.

Portis Style Industries, Inc., manufacturer of hats and caps, has purchased the entire block of property bounded by Frank, Orleans, Ontario and Ohio streets from the Adams and Westlake Company.

Static: Industry's High Voltage Hot Foot

(Continued from page 16)

tive flooring like concrete embedded with thin copper lead-off wires.

One of the peculiar features of a static fire or explosion is the difficulty encountered in pinning the disaster upon a static spark. The best that can be done in many cases where mills have been heavily damaged or even demolished is to cite the probable presence of static electricity. As a result, there is some argument, even among authorities on the subject, as to the present effectiveness of static safeguards within industry.

Some believe that the most critical industries - flour milling and petroleum processing, for examples - are adequately protected against Others insist that static is becoming an increasingly serious hazard to industry, that static fires and explosions are on the rise, and that industry generally is anything but adequately protected. One thing is certain: many concerns are not fully aware of the static threat within their own plants and as a result are in danger right now. The most modern methods of combatg static are not being utilized as dely or as intensively as they deve to be.

Since the creation of static eleccity normally cannot be prented, the principal methods of ptection involve carrying off arges harmlessly through groundz, humidity control and neutral-In factories where equipent consists of a number of maines that are insulated from each her, the safest practice is to inconnect all metal parts with copr wire and then ground the sysn with a common ground wire. iring the war, elaborate safety tems were installed in governent-supervised munitions plants volving miles of wire and giant tworks of static lead-offs which ade it almost impossible for static arges to build up to the sparkg point.

Static Can Be "Elimniated"

Many devices have been used to nimize the static build-up on ther, canvas and rubber belts. "eliminators" like ushes, spring clips and tinsel ridg the belt surface have been inilled and connected to ground res; other belts have been given conductive coating. One of the bst effective safeguards ever deloped has turned up in recent ars, however, in the form of conctive rubber belting which, when led with a steel pulley - itself a nductor, prevents static generaon at the source.

The same type of conductive rubr is also being used for truck es, tubing, matting, table tops d flooring (the latter, especially hospital operating rooms where sparks occasionally have uched off anesthetic vapors and us caused internal explosions tal to the patient.) In machiny, conductive rubber can be used drain off voltage before sparks n jump in a wide variety of spedized ways - for guide rolls, eeves, cradles, mountings and the

In industries where slight dampers does not harm products, huidifying the atmosphere with venating systems, steam jets or other eans has reduced the threat of the sparks by a wide margin oisture, of course, drains off volte like any other conductor. As

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Inquiries from principals or their authorized agents are invited.



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Crest-to-canyon views of a mountain wonderland from the glass enclosed Skytop Lounge—a new departure in car design. And you'll find the private rooms in The Milwaukee Road's new Olympian HIAWATHA sleeping cars perfect in every detail.

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THE Milwaukee Road

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a result, a factory that would ly within the danger zone with a relative humidity of 10 to 20 per cercan be made very nearly secur from static discharges when the humidity is increased to 60 per cercar above.

Another safeguard is the electrical "neutralizer," which ha proved especially valuable in ter tile mills where excessive humidii The nee might damage fabrics. tralizer produces an ionized or con ductive atmosphere through the ua of ordinary alternating currents. strong positive-negative electrical field is created and static charges or material passing through are ii stantly neutralized by oppositi charges within the field. Neutra izers are also being used in tissu mills, where static has a habit of making sheets stick to rolls, jan machinery and cause prolonged break-downs.

Still another innovation in the campaign against static is a serice of anti-static compounds which can be sprayed, wiped or brushed of such diverse static-builders as aut doorhandles, inner tubes, metern plastic sheets, and printing precylinders. The compounds, developed by the Merix Chemical Company of Chicago, leave a thin, in sulating film which is claimed to last indefinitely unless used on moving part, in which case friction wear requires re-application.

Grounding Workers

No factory that confronts a stati hazard can be adequately protectes unless workers, themselves, an properly grounded. The reason that the human body is capable of storing up surprisingly strong elec tric charges. Furthermore, as man people have suspected, there ar some individuals who, for one rea son or another, tend to build u static to a much higher degree tha These "human dyna is normal. mos," whose fingers reel off ele vator buttons and doorknobs wit agonizing regularity, are likely t have uncommonly dry skin, a char acteristic which tends to preven static accumulations from flowin off the body. Instead, they stor up until a spark ensues.

There is considerable evidence t show that such super-charged ind viduals are a real hazard if allowe

(Continued on page 40)

TRANSPORTATION and TRAFFIC

☆

BELATED Christmas gift to the railroads in the form of a \$25,000,000 annual freight rate inease was authorized on December by the Interstate Commerce Comission. This with other freight te increases which have become fective since June 30, 1946, the ommission estimates, will total aproximately 52 per cent and prouce about \$2,9000,000,000 addional revenue for the carriers anually. The new rate boost became fective January 11 on five days' otice and upped freight charges y six per cent within and between astern and Southern territory; five er cent within Western Trunk ine Zone 1 territory; four per cent ith Western territory other than one I of Western Trunk Line; hd five per cent on all interterribrial traffic, except between Eastn and Southern territory. Maxinum increases of six cents per cwt. ere set on fruits, vegetables and lelons and four cents per cwt. on agar and lumber. Charges for proctive service and demurrage were kcluded from the increase. Since is intended to afford the railroads mporary relief pending further earings on their Ex Parte No. 168 quest for a 13 per cent freight te boost, the increase will be aplied to total freight charges rather an the individual rate factors. he commission's order also authored freight forwarders and water arriers to make corresponding inreases in their rates simultaneously ith the rail rate increase. Hearing n the railroad's petition to make ne interim increases on Illinois tra-state traffic was held by the linois Commerce Commission on anuary 14 and the authorization is spected momentarily.

Increased Minimum Charges Susended: Increased minimum charges in shipments published in tariffs of the Central States Motor Freight

Bureau and the Chicago-Suburban Motor Carriers Association were suspended by the Interstate Commerce Commission. The suspended tariffs would have raised the Central territory minimum charge on a single shipment to \$2 and the Chicago-Suburban territory minimum charge to \$2 where pick-up and delivery was made within the limits of municipalities, villages or incorporated towns, \$2.50 outside such limits, and \$3 where deliveries were made to private residences. Suspension requests filed by The Chicago Association of Commerce and Industry pointed out how the proposed minimum charges would discriminate against Chicago shippers should they be permitted to become effective. Hearing in the proceedings, docketed as I. & S. M-2959, Minimum Charge Per Shipment-Central Territory and I. & S. M-2962, Minimum Charge Per Shipment-Chicago District, will be announced later.

Nationwide Express Scale Approved: The Interstate Commerce Commission in its report and order in Ex Parte No. 163, Increased Express Rates and Charges, 1946, approved the present western scale of express rates for nation-wide application. The order authorized the Railway Express Agency, Inc., to increase their Eastern and Southern territory rates to the basis now in effect in Western territory. The increases will become effective February 14 on statutory notice.

Important Transportation Legislation Introduced: Many important bills affecting transportation were introduced during the opening days of the 81st Congress. Probably the most important of these is H.R. 104 by Representative O'Hara of Minnesota, proposing to repeal the Reed-Bulwinkle Act (Section 5a of the Interstate Commerce Act). The act, exempting carriers conference



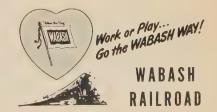
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method of rate making from antitrust laws, was enacted last June when Congress overrode a Presidential veto of the legislation. Other bills of importance which have been introduced include S. 257 to provide limitations on the time within which actions may be brought for the recovery of overcharges and undercharges by or against motor common carriers, water carriers and freight forwarders; H.R. 306 to establish a Department of Transportation; and H.R. 103 to establish a Federal Traffic Bureau. Several bills have also been introduced to repeal the transportation tax on persons and property and to amend the Railroad Retirement Act. Senator Johnson of Colorado, chairman of the Interstate and Foreign Commerce Committee, has introduced S. 236, "to codify and clarify the law and eliminate confusion with respect to transportation costs as elements of delivered prices." The bill is designed to end the confusion caused by the Supreme Court's decision in the Cement Institute basing point case. Senator Johnson is also chairman of the Senate Trade Policies Subcommittee formerly headed by Senati Capehart of Indiana.

Ask Reopening of Uniform Cla ification Case: The National 1 dustrial Traffic League has ped tioned the Interstate Commerc Commission for reopening and hearing of the uniform freight class ification proceeding, Docket N 28310. The petition points of "that there is uncertainty and con plete ignorance as to what the cla rates are going to be in connection with which the classification rating will be applied," and asks the con mission to notify the carriers to co fer further hearings on the uniform classification committee docket pen ing further consideration of til case. The league asks that in co termining uniform classification ra ings that pure classification pri ciples be used, that proper exceed tions be preserved, and that the 1 visions not be used as a means securing increased revenues.

November Package Cars 64.4 Pf Cent On-Time: Of the 23,175 pace age cars reported from Chicago du ing November, 1948, 14,932 or 644 per cent were placed for unloading at destination on schedule, accord ing to records compiled by TI Chicago Association of Commercial and Industry. The month's po formance was the best since Ju when a 64.8 per cent on-time per formance established a six year reord. Of the cars late during N vember, 5,314 or 22.9 per cent wes one day late; 1,664 or 7.2 per ce were two days late; 727 or 3.1 po cent were three days late; 288 1.2 per cent were four days latand 250 or 1.1 per cent were fir or more days late.

Static

(Continued from page 38)

to work near inflammable vapors edusts. In a California factory of woman is reported to have cause seven fires before she was transferred to a safer department and according to the Factory Mutual Record, the Endicott-Johnson She Company had on its payroll woman who was nothing short a firebug — even if unconscious so. Five times in one winter fireburst out in the rubber cement pashe was using; the fifth time she was laid up for three weeks; and when she finally came back to



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ork another fire was roaring away thin 15 minutes! No one else d similar trouble.

It is not difficult to determine ientifically whether individual orkers tend to store up static. The st involves a measuring device nnected by wire to foot plates on which a worker is asked to ind. His resistance to ground is en indicated in megohms on the ale meter, which is divided into to sections: one in which the restance is considered safe, and the her in which the resistance is own to be too high for work in izardous areas.

There are a variety of other safelards that can be used to minnize the possibility of sparks uched off by individuals. Some ctories have installed short flights steps plus grounded handles as means of automatically groundg employes before they enter hazdous buildings. This, of course, only a temporary precaution, nce charges will begin building up gain. As a result, considerable mphasis has been laid on the use conductive shoes and flooring.

Application Lags

An effective program of static introl is obviously the responsibility of management in factories and mills which present a fire or explosion hazard. Despite extension to explosion the development of explosion the scientific velopment of explosion the scientific velopment of the explosion on the industrial velopment of the explosion of the explosion of the industrial velopment of the indust

One evidence of this is the fact at controlling devices sometimes il; ground wires break, wear away get out of adjustment; even the ound itself may vary in its abily to carry off static charges. Electic utility companies in some areas ust burrow 50 or more feet into the earth to ground all equipment fely because the ground water wel fluctuates from season to season. Furthermore, the introduction new products and new manufacturing processes are, in some cases, kely to present entirely new hazeds.

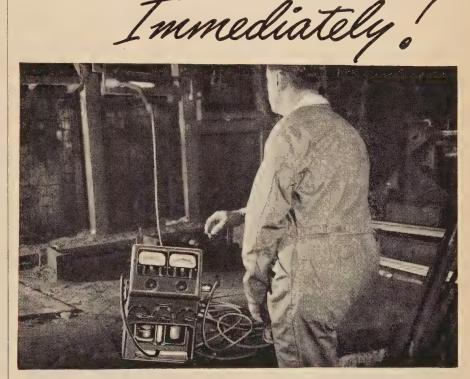
As a result, static electricity hazds demand the constant attention of trained experts. The American Mutual Life Insurance Company voiced this warning not long ago: "Careless maintenance will defeat the purpose of the controls planned and will inevitably result in serious fires and explosions and cause serious injuries to workers and destruction to property. Competent maintenance men are therefore important both for production and safety.

Security also demands that employes adhere constantly to safe practice rules. The human error element can be a serious one when

static is involved. For long years the petroleum industry has drummed away on the warning: when pouring gasoline, keep the metal hose nozzle in contact with the metal of the fuel tank to prevent a static jump. As occasionally happens, a truck driver was thinking of something else and forgot that basic precaution.

The result: an explosion that killed nine people, injured 41 others, some of them 200 feet away, and seared the leaves from trees 85 feet distant.

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CITIES (2) SERVICE







New Products

Water Demineralizer

A new line of water demineralizers, said to deliver the chemical equivalent of distilled water at a fraction of the cost of distilled water, has been introduced by the Industrial Filter and Pump Manufacturing Company, 1621 W. Carroll Avenue, Chicago 12. The demineralizers, which pass the water through beds of ion-exchange resins, are recommended for such industries as soap, ceramics, dyestuffs, enameling, and pharmaceuticals.

Field TV Meter

A new television field strength meter, designed to facilitate and improve TV installations, is the product of Transvision, Inc., New Rochelle, N.Y. The new meter, FSM-1, enables picture signal measurements to be made without the use of a complete television set, permits exact antenna orientation, checks the power of interfering signals, and also measures the loss or gain of various antenna and lead-in combinations.

High-Accuracy Electric Furnace

A new floor model electric furnace for tool and die work, hardening, drawing, and laboratory ash analysis, has been introduced by the K. H. Huppert Company, 6830 Cottage Grove Avenue, Chicago 37. The new furnace is said to provide extremely accurate heat control, achieved through the use of stepless input controllers mounted onto the base of the furnace and beneath the furnace itself. Since the controllers are integral parts of the unit, no external mountings need be made by the user.

Inside-Outside Heat Control

A new type of automatic clock-controlled thermostat that anticipates a building's heat requirements in relation to outside temperature as well as the time of day has been developed by the Weather Controls Division of Automatic Devices Company, 53 W. Jackson Blvd., Chicago 4. Called "Weather-Chron," the switch is installed on the outside of the building and thus changes the time that heating starts each morning and shuts down each evening as the weather changes. Heat, of

course, starts earlier on colder mornings.

"Neon" Ink

Something new in advertising display ideas is a fluorescent printing ink created by Switzer Brothern Company, Cleveland, O., and termed by the company "neon in print." Used on posters and other displays the new ink is said to make signal visible at four times the distance they would normally be seen. The inks, now available in orange and red, also grow brighter as the light dims.

Compact Snow Remover

Since snow is no less a problem on small town streets than on big city thoroughfares, the Barberr Greene Company, Aurora, Ill., had developed a small-size, one-man operated snow remover that improperated snow remover that improperates most of the features ob bigger models used in large cities. The Model 522 snow loader can load a five cubic yard truck in one minute, or about as much as four men can shovel in 20 minutes. It may also be converted to a year round bucket loader.

Multiple TV Viewers

A new television receiving system which allows as many as ten resmote-controlled viewing units, all centrally connected to one master tuner, to be installed in locationalike hotels, restaurants, schools and hospitals, has been introduced by Trans-Vue Corporation of Chicago. The viewing units, designed and engineered by Raytheon Manufacturing Company, are connected by coaxial cable to the master tuner.

Variable Speed Phonograph

A phonograph said by the company to be capable of handling all new record speeds as well as conventional speeds has been introduced by the Scott Radio Labora tories, Inc., 4541 N. Ravenswood Chicago.

Business Card Filer

The executive who is constantly shuffling through a thick batch of business cards in his pockets — and never finding the one he wants, may find the solution to his problem in business card filer, developed by

ecordplate Company, 16 E. Holly reet, Pasadena 1, Calif. Cards are tached to gummed filing tabs and serted in either of two sizes of ose leaf books, one holding 125 ards, the other 250 cards.

attery Booster

General Electric Company, Scheectady 5, N. Y., has added a new roduct to assist motorists troubled ith winter-weakened auto batries. The "Vitalizer," developed y the Lighting and Rectifier Dission, is about the size of a No. 2 an and, attached overnight to the ar, and the garage 110 volt line taintains chemical action in the attery and keeps the starting ower at summertime level. It can e stored in the glove compartment then not in use.

rends In Finance and Business

(Continued from page 11)

mphasis upon production as a diect goal for their own subordinates. They have other characteristics. They encourage employe participaon in the making of decisions; they bend more time in supervision and ess in straight production work; ney have a greater feeling of condence in their supervisory roles; nd they believe they, themselves, ate highly with the company. "Eviently, low production supervisors re so immediately concerned with he goal of production that they ry to reach it by what seems to be he most direct route," the report urmises. "They appear to lack inderstanding of the best means of chieving high production through sing their own time to effectively notivate their own employes."

The effective supervisor is also employe-centered" rather than production-centered," the Univerity interviewers discovered. He onsiders interest in his employes ather than production to be of rimary importance."

The Federal
When's A Morning-government is
After Not A quietly calling
quits on liquor advertising which im-

he proper brand, wake up the norning after feeling in the pink. The liquor advertising move by the Treasury Department's alcohol

tax unit is the upshot of Senatorial hearings last spring which brought a host of recommendations from both wets and drys as to what should be said and should not be said about specific brands.

As a result of the hearings and subsequent government action, such phrases as "Clear heads use Calvert's" and "sunny morning flavor" (Schenley) will no longer be used in advertising. Meanwhile, the government is encouraging the wine, beer and distilled spirits industries to formulate voluntary "advertising codes" to cover the most common criticisms.

Here, There and Everywhere

(Continued from page 8)

chase the week's food for the average wage earner's family, the National Industrial Conference Board has calculated. Surveying changes in food prices over the last third of a century, the board found that food costs "have increased" only a little more than 150 per cent," while earnings have risen six-fold over the 25 cent rate in 1914."

• Television Obsolescence — Colored television is not likely to make black and white video sets obsolete for at least another eight years, according to Arthur, B. Bronwell, professor of electrical engineering at the Northwestern University Tech-



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nological Institute. Professor Bronwell, who holds basic patents on a system of colored television, bases his statement on the fact that at present colored television receivers, although practical, cost several times

as much as black and white re-"The two fundamentas colored television methods available so far," he said, "involve compli cated and elaborate receiving sys

M-Day Planning As It Stands Today

(Continued from page 17)

a substantial slack in the economy. There was considerable unemployment. The price level, the money supply, and the volume of debt were of moderate proportions.

Today we have almost full employment, maximum production. Prices are high and there is inflation in the money supply and the volume of debt.

Will Be Under Attack

But there is another reason beside the economic. If we get into war again, part of the military action will take place in the United States itself. No longer can this nation count on the distance of oceans to protect it from the actual destruction, when the lengthening of bomber range and the development long-range guided missiles threaten our industrial establishments even in the hinterland. Although the cold war has put us on notice more completely than last time, the potential physical threat to our unmatched manufacturing power - the element that gave us victory twice - means that we will not have the same period of grace for mobilization as we did before.

This is the general line of reasoning of the National Security Resources Board, created by the same legislation that merged the War and Navy Departments into the National Military Establish-This board was charged with the duty of advising the President on:

Policies for the most effective mobilization of manpower in event

Programs for the most effective use of the nation's natural and industrial resources for military and civilian needs, for the stabilization of the civilian economy, and for its adjustment to wartime needs.

Policies for unifying the activities of federal agencies concerned with production, procurement, distribution, and transportation of supplies.

The relationship between poten-

tial supplies and requirements of manpower, resources, and produce tive facilities.

Policies for stockpiling and con serving strategic and critical mated

Strategic location of industries: services, government and economia activities.

In short, it was given the whold field of industrial and civilian mod bilization to plan. Arthur M. Hill the Greyhound Bus executive, was made chairman and the other memo bers were the Secretaries of States Treasury, Defense, Interior, Agri culture, Commerce, and Labor. Rec cently Hill, having twice extended his original leave from Greyhounds resigned, and President Trumari put John Steelman in charge tema porarily.

The public has not had a clean picture of what this board has been up to in the last 18 or 20 months Very soon, however, it will submit a report outlining the general blues print for the next M-Day, if ii comes. It will involve a compres hensive set of proposed new lawss to be enacted on a standby basis ready for instant effectiveness if wan

strikes.

Wide Control Planned

The scope of the potential controls is evident in a mere recital of the title headings of this proposed statute, in the draft that was under consideration prior to final decisions on the report. Staff mem bers drew up a suggested Emeri gency Powers Act containing the following 20 titles:

Coordination of Executive Agent

cies and Functions; Employment without Compensation; Emergency Contracting Authority; Creation and Powers of Government Corpo rations; Defense Facilities; Production Loan Guarantees; Acquisition and Disposition of Real Property Priorities and Allocations; Plant Seizure; Exemption from Antitrust Laws; Authority to Requisition: Import and Export Control; Cenorship of Communications; Price nd Wage Stabilization; Excess rofits Tax; Renegotiation of Conacts; Special Amortization of mergency Facilities; Employment ontrol; Settlement of Labor Disutes; General Provisions.

This, however, only outlines the reas in which the government roposes to exercise its control. If ny have been overlooked, it is ot apparent in the table of conents. There is far more detailed lanning work to be done. Some f it has been started.

Translating of the material needs f a future war rests first of all on master strategic military plan. This was the duty of the Joint thiefs of Staff and was worked ut, secretly of course, in last year's onferences at Key West, Fla., and Jewport, R. I.

The next step was for the Naional Military Establishment's Muitions Board to estimate of what he material need will require of adustry in kind and volume of roduction. This is the stage we re now in. At the outset the Munitions Board estimated it would take some six months to take this initial reading, indicating that they will be coming up with their preliminary figures around March 1. War weapons have changed drastically in nature from World War II. There is going to be a great difference in what we have to produce this time, in the atomic age, with its stress on guided missiles and jet planes.

In general, it is apparent that:

Many basic industries, such as steel, power, and transportation, will have no real conversion problem but will be called on to continue their peacetime operations on an expanded scale.

Other important industries, such as those producing electrical and communications equipment, will continue to turn out the same kind of goods, also on an expanded scale, but with changed designs. Their conversion will be partial.

Some of the largest industries, however, will have to be almost completely converted from civilian to military production. The automobile industry is an example.

Basic to industrial conversion, of course, is the machine tool industry. Production potential is directly reflected in tool capacity. It is here the pressure is first felt in industrial mobilization.

As a first step, therefore, the NSRB made a survey of machine tools. It was found that government reserves were partly adequate to bridge the gap between initial emergency requirements and the attainment of full wartime production.

Needs Listed

Many tools, however, were found to be in poor condition, and there was no central control plan for the rapid distribution of reserve tools. The Board developed a list of 100,000 tools that would have to be added in event of war, and started informing the nation's tool manufacturers of what would be required of them in the initial stages of an emergency.

Through the RFC it began placing "phantom" pool orders—orders that would need only a telegram from Washington to serve as a temporary letter of intent to become effective. The board believes

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time for early spring use.

Send now for a free copy of Bulletin 201 that shows, pictorially, the step-by-step progress of a fan through our shop. It proves our point that proper servicing can be done only with special tools and skills. There is no obligation.

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it has in this move laid the groundwork for saving six months to a year in getting full war output under way.

These phantom orders amount to something over 700,000,000. The present statistics of the machine tool industry, according to the NSRB survey, are as follows:

It is currently operating at an annual volume of about \$300,000,000 but its present capacity, based on a single-shift, 40-hour week, is twice that. This is considerably above previous peacetime levels.

There are approximately 1,775,000 units of metal working machinery in the U.S., about 700,000 more than in 1940. The government reserve consists of more than 90,000 in storage, including those in questionable condition.

In addition, 151 complete plants have been retained by the military establishment, some in operation and others in standby condition. Another 242 have been released for disposal with a national security clause which permits their quick conversion to war.

"From these aspects," says the NSRB study, "compared to 1940 the position is favorable . . . The machine tool industry itself would not require substantial amounts of tools to attain full war capacity. Increase of plant would not be large—less, it is estimated, than 25 per cent of World War II plant expansion . . .

"For the current air program, the tool requirements should not overtax the machine tool industry at its present capacity. Technological problems of machining, rather than tools themselves, constitute the basic machine problem in the air program . . .

"Other metal working machinery and plant equipment go hand in hand and are of equal importance in a war production effort. These include such items as metal forming and shaping machines, cutting tools, gauges, light power and hand tools, abrasive products, foundry equipment, industrial furnaces, cranes, hoists, monorail systems and chains."

Since the NSRB recognizes the necessity for continuing study of mobilization plans, it intends to review its pool orders at least once a year to make sure they conform to any changes in arms programs, or

any radical changes in the manufacturers' capacities.

The NSRB hopes to extend the type of preparedness to other fields. Meantime it is seeking to go ahead with other types of preparation-stockpiling, revision of the paper forms of the last war on the basis of manufacturers' experience with them, centralization of administration so that war producers will not again undergo conflicting orders from different Washington agencies (many business men will wonder it that is possible), and encouraging dispersal of industry.

Dispersal is a subject that has come in for considerable attention because of the different nature of the new warfare that promises to strike faster than the speed of sound at concentrations like Destroit, Pittsburgh, Chicago, Clever land, Buffalo, and Baltimore.

Gayle W. Arnold, assistant direct tor of production for the NSRB, in a recent speech before the Society of Industrial Realtors:

"We must take into account the ever-changing concepts of military strategy, which envision attacks ob unprecedented magnitude againss our more vital centers of production. Industry itself has a big stake in the proper dispersion of its facilities, not only from a national security viewpoint, but to preserve its very existence."

Urban Concentration

He noted that 75 per cent of our urban establishment — the key to the successful functioning of our civilian economy in peace or war — is concentrated in 140 compact target areas, and that 45 per cent of it is in the 19 largest areas.

Dispersion, he conceded, must be economically feasible, but balancing that factor against the need for diffusing industry in targets small enough and scattered enough to make their bombing prohibitive in cost and energy to an enemy, he laid down this rule-of-thumb to guide industry in its plans for locating plants: pick communities of not more than 50,000 people, surrounded by 10 miles of open space

In two wars, America's greatest strength has been its power of production. This in outline, is what the government is planning in or der to preserve and utilize that great power if war comes again.

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On the suburban train, Jones had just read a long letter he had received that day from his old home town. Mellowed by the happy memories it conjured, he turned to the stranger beside him and genially remarked, "Did you ever get a letter that brought back visions of the past?"

Stark misery stared out of the other's

"Have I?" the man cried. "Only today I got one from the government, telling me I still owed them \$1,500 on my 1944 income tax.

A fat lady stepped on the scales. They were out of order and an indicator stopped

An inebriated gent watched her intently. "My gosh," he marveled, "she's hollow!"

Two little girls were discussing their families. "Why does your grandmother read the Bible so much?" asked one.
Replied the other: "I think she's cramming for her finals."

Friend: "What's Dick doing now?" Farmer: "Well, he's a doctorin'."

"And John?"

"He's horse tradin'."

"And William?"

"He's sorter savin' souls."

"And Tom?"

"Well, Tom he's sorter politicin' "And you?"

"I? Well, I'm sorter farmin' an' afeedin' Dick, John, William an' Tom."

Patient: "Since we've known each other so long, doctor, I'm not going to insult you by paying my bill, but I'll leave you a handsome legacy in my will."

Doctor: "That's very nice of you, I'm sure. By the way, just let me have that prescription again. There's a slight change I'd like to make in it.

Bill: "Why so melancholy, old man?"

John: "My girl gave me my ring back
last night."

Bill: "Well, buck up, there are others." John: "Yes, of course, but somehow I can't help feeling sorry for the poor girl.'

A clergyman paused in the middle of his sermon to eye a group of disturbers with evident disapproval. "I am always reluctant to expose those who misbehave during services," he said at length, "because of an experience I had some years ago. A young man who sat before me was laughing, talking and making grimaces. I was annoyed and rebuked him severely. Later I was told I had made a grave mistake. The man I had reproved was an idiot."

Father (speaking to prospect): "The man who gets my daughter will get a prize."

Prospect: "May I see it, please?"

A man who boasts he runs things around the house is referring to the lawn mower, washing machine and errands.

The gang was having an old fashioned sleigh ride and everybody was having a wonderful time. But one girl sighed unhappily.
"What's the matter?" asked the hand-

some senior.

"Nobody loves me, and my hands are cold."

'Oh, that's all right," he replied softly. "Your mother loves you, and you can sit on your hands." After a visit to dancing school, or mother advised her small daughter the she should not just dance silently like

totem pole; talking to her partner wa also a part of the social picture.

On a later visit the mother saw the each time the music started, the san little boy tore across the floor, away her daughter, and swept her away the music.

On the way home, the mother ask why the same lad chose her for eve

"Oh, him," her small daughter e plained. "I'm telling him a continue murder mystery."

"I see," said Dora, "that a man what speaks six languages has just married woman who speaks three."
"That," replied Roy," seems to be about the right handicap."

Fond mother: "I hope my little darlin has been as good as gold all day." Sitter: "No, ma'am, he went off th gold standard about nap time."

"Pull over, mister," said the traffic con "You haven't any tail light."

The motorist stopped, got out for look, and was speechless with dismay. "Well, it's bad, but not that bad," saa

the officer.

Recovering his voice, the motori-quavered, "It's not the tail light tha bothers me, but what's become of m trailer?"

Art student: "You're the first model I've kissed."

Model: "Really? How many have you had?"

Art student: "Four – an apple, as orange, a vase of flowers, and you."

"Do you say your prayers every night Trudy?" asked the minister.

"Oh, no; Mummy says them for me answered Trudy. "Indeed; and what does she say?" h

queried. "Thank God you're in bed!"



I found it, Mr. Eldridge. You compounded the four per cent interest quarterly instead of semi-annually.